Accession Medical Standards Analysis & Research Activity
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Executive Summary

The Accession Medical Standards Analysis and Research Activity (AMSARA) has completed its fourteenth year of providing the Department of Defense with evidence-based evaluations of accession standards. AMSARA evaluates accession medical standards and retention programs to improve military readiness by maximizing both the accession and retention of motivated and capable recruits. This report provides findings from selected special studies and descriptive data on fiscal year 2009 accessions. This is the second AMSARA annual report analyzing data by fiscal rather than calendar year.

Section 1 and 2 of this report, 'Studies' and 'Publications, Abstracts, and Poster Presentations, present selected research conducted at AMSARA. The first study is an extension of studies completed for the Accession Medical Standards Working Group (AMSWG). This study examines the ten most common disqualifying within eight body systems and describes the incidence of waiver, accession, EPTS, and attrition for each condition. The second study compares EPTS records received by AMSARA from USMEPCOM to those received by AMSARA directly from Army basic training bases. The third study compares and contrasts the accession medical standards and the deployment medical standards. Also included are abstracts of manuscripts published and poster presented in FY 2009 by AMSARA.

Section 3 of this report includes the descriptive statistics AMSARA compiles and publishes annually for historical and reference value. Descriptive statistics are for applicants who enlisted in FY09 and are compared to the five year aggregate data from fiscal years 2004-2008. Data are collected while the recruits remain on their first year of active duty. By convention, the annual report is dated for the first complete year after enlistment (fiscal year 2010). Comparisons can be made between services and on occasion between enlisted component (active, reserve, guard).

Approximately 339,000 Active, Reserve, and National Guard enlisted applicants were examined for medical fitness at Military Entrance Processing Stations (MEPS) in 2009 compared to approximately 279,000 per year average from 2004 to 2008. While the age, gender, and race, of Active Duty enlisted, Reserves, and Guard applicants remained relatively consistent, it was observed that a greater proportion of active duty applicants in 2009 had a high school diploma and a greater proportion of applicants also had a bachelor's degree compared to the previous five years. In 2009, applicants scoring in the lowest Armed Forces Qualification test (AFQT) percentiles for military eligibility (11-49th) decreased as compared to the previous 5-year period in Active Duty, Reserve, and National Guard applicants relative to the previous 5-year period.

Approximately 11% of applicants for Active Duty enlisted service were initially disqualified for service due to permanently disqualifying medical conditions, and another 7% received disqualifications for conditions that could be remediated, primarily excess body weight or marijuana use. Such recruits, however, are less likely to ultimately become service members, as approximately 51% (2004-2008) of applicants with temporary disqualifications and 46% (2004-2008) of applicants with permanently disqualifying conditions are subsequently gained onto active duty service, compared to 74% of fully qualified recruits who accessed. The most common reasons for medical disqualifications in 2009 were exceeding weight/body fat limits and nondependent abuse of cannabis, both considered temporary disqualifications. These were followed by disorders of refraction and accommodation and hearing deficiency, both of which are permanent disqualifications.

Accession medical waivers are considered by each service for applicants with a disqualifying medical condition. Accordingly, the conditions most frequently considered for a waiver closely reflect the most common permanently disqualifying conditions. In total, about 31,000 applications for accession medical waivers were considered in 2009. The percentage of waivers approved varies substantially by the medical condition being considered, with overall approval percentages ranging from 55% to almost 100% for the most commonly applied for and most highly approved waivers. Differences in approval percentages between the services may reflect differences in the applicant pools applying to the services, different distributions of conditions being considered for waiver, or different needs of each service. There have been no apparent trends in approval rates from 2004 to 2009 for the services.

Hospitalization data are provided for the period 2004-2009. In 2009, there were approximately 6,400 hospitalizations among active duty enlistees (all services) in the first year of service. The top reasons for hospitalization within the first year of service for all services in 2004-2009 were psychiatric conditions, pneumonia and influenza, and infections of the skin and subcutaneous tissue. During the first two years of service, psychiatric conditions remained the most frequent reason for hospital admissions. However, the frequency of hospitalizations for both complications of pregnancy and injuries increased dramatically when compared to the first year of service and these categories moved into the second and third most common reasons for hospital admissions respectively. For first-time active duty enlistees who accessed in 2004-2009, Army enlistees had the highest risk of hospitalization followed by the Marines with the second high risk. Navy enlistees had the lowest risk of hospitalization. Women, whites, those of older in age at enlistment, and those with lower military aptitude score (AFQT) were at higher risk for hospitalization.

All-cause attrition of first-time active duty recruits following 90, 180, 365, and 730 days of service is also described. At one year, the Army had the highest rate of attrition for all services considered (approximately 15%) while the Marines had the lowest (about 12%). Being female, increasing age (except for the >30 category), and scoring in the lower percentile groups on the AFQT are all characteristics associated with significantly higher attrition at all points of assessment.

Discharges of recent enlistees for medical conditions that existed prior to service are a costly problem for all branches of the military, and are considerably more common than data would indicate. Documentation of EPTS discharges is requested from each Initial Entry Training (IET) sites to USMEPCOM but this reporting is not required by service regulations. The total numbers of reported discharges have varied over time, ranging from a high of approximately 8,000 in 2004 to a low of about 5,100 in 2009. Variation by training base over time has been significant.

Past AMSARA studies have shown that the great majority of EPTS discharges are for medical conditions that were not discovered or disclosed at the time of application for service, with concealment by the applicant being the most common scenario. Accordingly, the primary problem of EPTS discharges appears to be the bypassing of accession medical standards rather than the implementation of those standards. Psychiatric conditions, orthopedic conditions, and asthma continue to be the most common causes of EPTS discharges reported to USMEPCOM. Risk of EPTS discharge varies by service, with those in the Air Force having the lowest risk and Marines the highest. Increased risk of EPTS discharge is observed for females, recruits older than 20 years of age at accession, whites, and for those recruits who scored in the lower AFQT percentile score groups.

Disability discharge is very infrequent among new enlistees, with less than one percent of enlistees being considered for such a discharge. However, disability discharge among these first year enlistees within the first year of service has increased from 2004 (0.56%) to 2008 (0.59%) (2009 is not reported here due to incomplete follow up time). The majority of disability discharges for both in all services during the first year of service were prosthetic implants and diseases of the musculoskeletal system and impairments and diseases of the spine, skull, limbs, and extremities; though schizophrenia and other psychotic disorders were the second leading cause of disability discharge in the first year of service. Data on Navy and Marine disability discharges are included in the FY 2010 annual report for the first time for FY 2004-FY 2009.

AMSARA is committed to further development of evidence-based medical accession standards to enable the DoD to enlist the highest quality applicants in a cost-effective manner, thereby ensuring a healthy, fit, and effective force. The following programmatic recommendations are based on 14 years of research:

1. Various databases must be improved. For example, waiver data do not provide sufficient clinical detail to allow analyses of waiver decision criteria.

2. EPTS classification and reporting from the IET sites to MEPCOM, which is still passive, should be mandated and standardized by DoD/service regulations. Analysis would be enhanced with conversion from paper to digital records.

3. AMSARA should develop expertise in cost-benefit analyses in order to better advise DoD medical standards policy makers.

4. AMSARA should continue prospective studies similar to the Assessment of Recruit Motivation and Strength (ARMS) (a study evaluating those who exceed Army body fat standards using a physical fitness test on accession) that challenge current accession standards. MEPS-based studies that are outcome oriented (including morbidity, occupational qualification and performance, deployability, and attrition) in the area of physical and mental fitness, including motivation to serve, should be prioritized.

5. Rather than study accession medical standards in isolation, the medical standards across the continuum of a service member's life-cycle should be analyzed using evidence-based principles. This would include medical standards for deployment and retention, in addition to accession medical standards. In FY 2010 at the direction of ASD Health Affairs, Clinical Program and Policy AMSARA began to systematically evaluate each service's Disability Evaluation System. The first retention medical standards analysis and research report is planned for publication in FY 2011. Future plans include similar evidence of DoD and Combatant Command medical deployment standards.

Introduction

The Medical-Personnel Executive Steering Committee (formerly the Accession Medical Standards Steering Committee) was established by the Under Secretary of Defense (Personnel and Readiness) to integrate the medical and personnel communities so they could provide policy guidance and establish standards for accession requirements. These standards would stem from evidence-based information provided by analysis and research. The committee is co-chaired by the Under Deputy Assistant Secretary of Defense (Military Personnel Policy) and the Deputy Assistant Secretary of Defense (Clinical and Program Policy) and comprises representatives from the Office of the Assistant Secretary of Defense (Force Health Protection and Readiness), Office of the Assistant Secretary of Defense (Health Affairs), Office of the Assistant Secretary of Defense (Reserve Affairs), Offices of the Service Surgeons General, Offices of the Service Deputy Chiefs of Staff for Personnel, and Health and Safety Directorate (Department of Homeland Security, U.S. Coast Guard).

The Accession Medical Standards Working Group is a subordinate working group that reviews accession medical policy issues contained in DoD Instruction 6130.4, entitled "Medical Standards for Appointment, Enlistment, or Induction in the Armed Forces." This group is composed of representatives from each of the offices listed above.

AMSARA was established in 1996 within the Division of Preventive Medicine at Walter Reed Army Institute of Research to support the efforts of the Accession Medical Standards Working Group. The mission of AMSARA is to support the development of evidence-based accession standards by guiding the improvement of medical and administrative databases, conducting epidemiologic analyses, and integrating relevant operational, clinical, and economic considerations into policy recommendations. AMSARA has the following seven key objectives:

1. Validate current and proposed standards utilizing existing databases (e.g., should asthma as a child be disqualifying?);
2. Incorporate prospective research studies to challenge selected standards (e.g., are body weight standards adequate measures of fitness?);
3. Validate assessment techniques (e.g., improve current screening tools);
4. Perform quality assurance (e.g., monitor geographic variation);
5. Optimize assessment techniques (e.g., develop attrition and morbidity prediction models);
6. Track impact of policies, procedures, and waivers;
7. Recommend changes to enhance readiness, protect health, and save money.

Military staffing to support this effort includes CPT Marlene Gubata, Chief, AMSARA, and COL David N. Niebuhr, Director, Division of Preventive Medicine.

AMSARA is augmented with contract support through Allied Technology Group, Inc. Staff in 2009 included Dr. David N. Cowan, Project Manager; Bin Yi, Statistician; Elizabeth Packnett, Lynn Fan, Mikayla Chubb, Matthew Barker, Caitlin Blandford, Nadia Urban, Analysts; Janice Gary, Data Manager/Analyst; and Vielka Rivera, Program Administrative Assistant.

1. STUDIES

Accession Medical Standards Working Group (AMSWG) Review of Current and Proposed Standards

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Background

As part of an ongoing relationship with the Accession Medical Standards Working Group (AMSWG), Accession Medical standards analysis & Research Activity (AMSARA) prepares regular reports on collections of medical conditions that are identified or disclosed during the initial Military Entrance Processing Station (MEPS) medical examination among first time Active Duty applicants. These reports examine the frequency of these selected medical conditions among the cohort of applicants, and the incidence of selected outcomes among those who seek medical waivers for identified conditions.

Previous studies [1] by AMSARA have shown that individuals with many but not all conditions requiring a medical waiver for accession have a relatively small increase in rate of attrition at multiple follow-up points after accession. However, not all disqualifying conditions have an association for an increase risk of attrition, and some highly prevalent conditions may or may not fall into this category [2-9]. In order to understand the broader prevalence and impact of these medical conditions on the military applicant and recruit population, a statistical summary was prepared for the top ten disqualifying conditions from each AMSWG system reviewed to describe the prevalence and attrition outcome compared.

Methods

All first-time, active duty applicants for enlisted service in the Army, Navy, Marine Corps, and Air Force who had an initial medical examination performed in CY 2004 through CY 2008 were eligible for study. If an applicant had a MEPS record with an International Classification of Diseases 9th revision (ICD-9) code for a disqualifying medical condition, he or she was included in the summary. About (10%) of applicants have at least one permanent DQ condition; of these, about 19% have more than one condition. In order to assess attrition associated with specific DQ conditions, individuals with more than one ICD-9 code were excluded from analysis.

The list of specific ICD-9 codes to be used was generated by an ICD-9 coder and an analyst from conditions outlined in the Department of Defense Instruction (DoDI) 6130.4. The codes used in this analysis were generated from the following DoDI systems: dermatology, cardiology, pulmonary, orthopedic, mental and behavioral, neurological, ears, nose and throat (ENT), visual and auditory, gastrointestinal, and, nephrology/gynecology/genitourinary. Subjects were matched to corresponding accession, waiver, existed prior to service (EPTS), and attrition records by social security number.

For each condition, the following statistics were determined: the prevalence of each condition as determined against the total applicant population of 1,031,928 for CY 2004 to CY 2008, the frequency of applicants who sought and were granted waivers for their condition, the frequency and percentage of applicants who accessed with those waivers, and the frequency and percentage of applicants who were discharged from service within 1-yr of accession. The ten most frequent conditions from each system are presented in this summary.

Results

The 10 most frequent conditions for each system are presented in Tables 1.1-1.10. Overall, the most prevalent disqualifying conditions noted among applicants were: cannabis dependence or abuse (193.3 (per 10,000)), uncorrectable visual acuity (82.9), hearing deficiency (76.3), asthma (46.4), and pregnancy (27.3). There was substantial variability in condition frequency within and across systems. For some systems the most common diagnosis was quite rare (e.g., Neurological System: Paralysis, weakness, lack of coordination prevalence, at 3.8); the prevalence for other conditions (e.g., Mental & Behavioral System: Cannabis dependence or abuse, at 193.3) could be up to 50 times greater). Within some systems the prevalence was similar for the more frequent conditions, while within other conditions, such as Ears, Nose, & Throat system, there was a 15-fold difference in prevalence between the first and second condition.

Overall, about one third of the applicants who were disqualified for the selected conditions sought waivers, and approximately (60%) of those seeking a waiver were granted, but these varied across and within systems. Accession rates for those who were granted a waiver for prevalent conditions varied; for example, (51.1%) of applicants with a waiver for elevated blood pressure without a hypertensive diagnosis accessed, compared to (12.6%) of those with a waiver for cocaine dependence. Attrition rates for most prevalent conditions were about (18%).

TABLE 1.1 TEN MOST FREQUENT DERMATOLOGY CONDITIONS

Dermatology System	DQs	Prevalence	Applied waiver	% Sought	Waived	% Waived	Accessed	% Accessed	1-yr attrition	% attrit
Atopic dermatitis	2,139	20.7	686	32.1	393	57.3	171	43.5	30	17.5
Severe acne	902	8.7	265	29.4	170	64.2	77	45.3	13	16.9
Disorders of the nail	833	8.1	203	24.4	126	62.1	74	58.7	12	16.2
Congenital or acquired anomalies of the skin	755	7.3	237	31.4	149	62.9	71	47.7	10	14.1
Pilonidal cyst	708	6.9	222	31.4	138	62.2	46	33.3	7	15.2
Psoriasis	678	6.6	220	32.4	136	61.8	40	29.4	8	20.0
Plantar warts	331	3.2	113	34.1	71	62.8	28	39.4	4	14.3
Localized fungal infection	278	2.7	44	15.8	29	65.9	15	51.7	3	20.0
Current scars	247	2.4	58	23.5	36	62.1	18	50.0	3	16.7
Neurofibromatoisis	116	1.1	31	26.7	17	54.8	0	0.0	0	-

TABLE 1.2 TEN MOST FREQUENT CARDIOLOGY CONDITIONS

Cardiology System	DQs	Prevalence	Applied waiver	% Sought	Waived	% Waived	Accessed	% Accessed	1-yr attrition	% attrit
Elevated BP w/o hypertensive diagnosis	2,518	24.4	870	34.6	521	59.9	266	51.1	43	16.2
Hypertensive disease	2,513	24.4	773	30.8	446	57.7	205	46.0	35	17.1
Congenital heart disease	1,042	10.1	304	29.2	191	62.8	81	42.4	12	14.8
Arrhythmias	677	6.6	139	20.5	85	61.2	37	43.5	5	13.5
Valvular heart disease	588	5.7	196	33.3	121	61.7	45	37.2	7	15.6
Persistent tachycardia	470	4.6	210	44.7	130	61.9	73	56.2	18	24.7
Syncope	270	2.6	62	23.0	37	59.7	13	35.1	2	15.4
Cardiomyopathy and myocardial disease	248	2.4	94	37.9	54	57.4	24	44.4	3	12.5
Abnormality/conduction disorders (ECG)	108	1.0	35	32.4	19	54.3	8	42.1	1	12.5
Venous disease	103	1.0	30	29.1	14	46.7	6	42.9	0	0.0

TABLE 1.3 TEN MOST FREQUENT PULMONARY CONDITIONS

Pulmonary System	DQs	Prevalence	Applied waiver	% Sought	Waived	% Waived	Accessed	% Accessed	1-yr attrition	% attrit
Asthma	4,787	46.4	1,474	30.8	871	59.1	320	36.7	64	20.0
Allergies, other anaphylaxis shock	416	4.0	87	20.9	56	64.4	19	33.9	4	21.1
Bronchitis	246	2.4	89	36.2	49	55.1	23	46.9	5	21.7
Chest wall malformation	171	1.7	75	43.9	52	69.3	14	26.9	3	21.4
Allergies, insect venom	169	1.6	76	45.0	46	60.5	19	41.3	5	26.3
Allergies, unspecified	126	1.2	61	48.4	44	72.1	23	52.3	3	13.0
Tuberculosis, latent	101	1.0	13	12.9	6	46.2	2	33.3	2	100.0
Tuberculosis, active	91	0.9	23	25.3	16	69.6	10	62.5	3	30.0
Allergies, adverse effect of drug	52	0.5	24	46.2	15	62.5	6	40.0	0	0.0
Anaphylactic shock due to food	48	0.5	13	27.1	10	76.9	2	20.0	1	50.0

TABLE 1.4 TEN MOST FREQUENT CARDIOLOGY CONDITIONS

Mental & Behavioral System	DQs	Prevalence	Applied waiver	% Sought	Waived	% Waived	Accessed	% Accessed	1-yr attrition	% attrit
Cannabis dependence or abuse	19,948	193.3	7,050	35.3	4,241	60.2	1,162	27.4	200	17.2
Cocaine dependence or abuse	2,426	23.5	988	40.7	597	60.4	75	12.6	9	12.0
ADD/ADHD	2,017	19.5	544	27.0	334	61.4	171	51.2	24	14.0
Suicidal behavior	893	8.7	199	22.3	122	61.3	35	28.7	5	14.3
Conduct/behavior disorder	690	6.7	187	27.1	102	54.5	32	31.4	4	12.5
Amphetamine dependence or abuse	645	6.3	178	27.6	103	57.9	10	9.7	0	0.0
Personality disorders	559	5.4	124	22.2	75	60.5	12	16.0	3	25.0
Alcohol dependence or abuse	531	5.1	119	22.4	71	59.7	22	31.0	1	4.5
Adjustment disorders	272	2.6	82	30.1	47	57.3	19	40.4	3	15.8
Unspecified or mixed substance dependence or abuse	221	2.1	79	35.7	42	53.2	7	16.7	1	14.3

TABLE 1.5 TEN MOST FREQUENT ORTHOPEDIC CONDITIONS

Orthopedic System	DQs	Prevalence	Applied waiver	% Sought	Waived	% Waived	Accessed	% Accessed	1-yr attrition	% attrit
Deviation or curvature of spine	1,260	12.2	416	33.0	260	62.5	70	26.9	16	22.9
History of shoulder instability or dislocation	1,176	11.4	312	26.5	182	58.3	76	41.8	12	15.8
Contusion of bone or joint	454	4.4	82	18.1	52	63.4	35	67.3	7	20.0
Condition that requires frequent treatment	426	4.1	134	31.5	81	60.4	23	28.4	9	39.1
Pes planus	395	3.8	102	25.8	67	65.7	33	49.3	6	18.2
Deformity, disease or chronic pain of lower leg region	378	3.7	115	30.4	69	60.0	26	37.7	7	26.9
General shoulder pain, disease, weakness	350	3.4	89	25.4	53	59.6	21	39.6	2	9.5
Chondromalacia	340	3.3	79	23.2	37	46.8	13	35.1	2	15.4
Retained hardware	321	3.1	50	15.6	31	62.0	16	51.6	3	18.8
Herniated nucleus pulposus	318	3.1	94	29.6	55	58.5	16	29.1	2	12.5

TABLE 1.6 TEN MOST FREQUENT NEUROLOGIC CONDITIONS

Neurological System	DQs	Prevalence	Applied waiver	% Sought	Waived	% Waived	Accessed	% Accessed	1-yr attrition	% attrit
Paralysis, weakness, lack of coordination	397	3.8	42	10.6	26	61.9	9	34.6	6	66.7
Recurrent headaches	392	3.8	130	33.2	72	55.4	20	27.8	4	20.0
Head injury, major (unconsciousness)	261	2.5	50	19.2	28	56.0	14	50.0	2	14.3
Seizure	206	2.0	44	21.4	24	54.5	4	16.7	0	0.0
Degenerative disorders	69	0.7	20	29.0	7	35.0	1	14.3	1	100.0
Head injury (hematoma)	56	0.5	15	26.8	9	60.0	5	55.6	1	20.0
Congenital or acquired anomalies of CNS	49	0.5	16	32.7	9	56.3	1	11.1	0	0.0
Acute infection of CNS	43	0.4	12	27.9	9	75.0	3	33.3	1	33.3
Cerebrovascular conditions	42	0.4	17	40.5	12	70.6	2	16.7	0	0.0
Head injury, major (cerebral laceration)	40	0.4	14	35.0	6	42.9	3	50.0	0	0.0

TABLE 1.7 TEN MOST FREQUENT EAR, NOSE, AND THROAT CONDITIONS

Ears, Nose, & Throat (ENT)	DQs	Prevalence	Applied waiver	% Sought	Waived	% Waived	Accessed	% Accessed	1-yr attrition	% attrit
Hearing deficiency	7,870	76.3	2,268	28.8	1,360	60.0	353	26.0	63	17.8
Chronic otitis media	512	5.0	159	31.1	96	60.4	42	43.8	3	7.1
Ear drum peforation	382	3.7	86	22.5	58	67.4	15	25.9	2	13.3
Visually caviated teeth	302	2.9	181	59.9	111	61.3	50	45.0	11	22.0
Current orthodontic appliances	155	1.5	56	36.1	37	66.1	20	54.1	3	15.0
Atresia, microtia, or other external ear deformity	76	0.7	22	28.9	13	59.1	7	53.8	1	14.3
Current severe malocclusion	73	0.7	14	19.2	11	78.6	5	45.5	0	0.0
Chronic sinusitis	64	0.6	23	35.9	9	39.1	7	77.8	2	28.6
Congenital cysts	50	0.5	22	44.0	8	36.4	3	37.5	0	0.0
Disease or pathology of the jaws	42	0.4	9	21.4	3	33.3	3	100.0	1	33.3

TABLE 1.8 TEN MOST FREQUENT VISUAL CONDITIONS

Visual System	DQs	Prevalence	Applied waiver	% Sought	Waived	% Waived	Accessed	% Accessed	1-yr attrition	% attrit
Uncorrectable visual acuity	8,553	82.9	2,902	33.9	1,760	60.6	773	43.9	155	20.1
refractive surgery	1,185	11.5	363	30.6	224	61.7	117	52.2	22	18.8
Corneal Neovascularization or opaqification	579	5.6	115	19.9	67	58.3	8	11.9	0	0.0
Opacities of the lens	215	2.1	59	27.4	36	61.0	14	38.9	5	35.7
Glaucoma	86	0.8	26	30.2	17	65.4	5	29.4	2	40.0
Other organic disease of the eye	81	0.8	7	8.6	5	71.4	2	40.0	0	0.0
Intraocular foreign body	78	0.8	25	32.1	19	76.0	8	42.1	1	12.5
Nystagmus	77	0.7	24	31.2	14	58.3	7	50.0	2	28.6
Diplopia	68	0.7	14	20.6	11	78.6	4	36.4	0	0.0
Esotropia, exotropia or hypertropia	66	0.6	28	42.4	14	50.0	9	64.3	3	33.3

TABLE 1.9 TEN MOST FREQUENT GASTROINTESTINAL CONDITIONS

Gastrointestinal System	DQs	Prevalence	Applied waiver	% Sought	Waived	% Waived	Accessed	% Accessed	1-yr attrition	% attrit
Hernia	2,029	19.7	565	27.8	335	59.3	158	47.2	18	11.4
Gastroesophageal reflux disease (GERD)	300	2.9	91	30.3	46	50.5	24	52.2	9	37.5
Diabetes mellitus	245	2.4	50	20.4	29	58.0	5	17.2	2	40.0
Dysmotility disorders	178	1.7	57	32.0	41	71.9	18	43.9	1	5.6
Abdominal operations	132	1.3	35	26.5	27	77.1	11	40.7	1	9.1
Goiter	103	1.0	33	32.0	26	78.8	6	23.1	2	33.3
Inflammatory bowel disease	89	0.9	28	31.5	17	60.7	2	11.8	1	50.0
Cholecystitis	88	0.9	13	14.8	10	76.9	4	40.0	0	0.0
Surgical correction for GERD	75	0.7	31	41.3	22	71.0	11	50.0	1	9.1
Hypothyroidism	62	0.6	15	24.2	8	53.3	1	12.5	1	100.0

TABLE 1.10 TEN MOST FREQUENT NEPHROLOGIC, GYNOCOLOGIC, AND GENITOURINARY CONDITIONS

Neph/Gyn/GU System	DQs	Prevalence	Applied waiver	% Sought	Waived	% Waived	Accessed	% Accessed	1-yr attrition	% attrit
Pregnancy	2,817	27.3	937	33.3	567	60.5	132	23.3	27	20.5
Hydrocele	654	6.3	200	30.6	118	59.0	51	43.2	8	15.7
Proteinuria	422	4.1	129	30.6	84	65.1	26	31.0	6	23.1
Condyloma accuminatum or genital infection or ulceration	416	4.0	108	26.0	67	62.0	18	26.9	0	0.0
Urolthiasis	390	3.8	123	31.5	75	61.0	29	38.7	5	17.2
Absence of testicles	287	2.8	100	34.8	59	59.0	31	52.5	3	9.7
Urinary tract disease or hematuria	273	2.6	46	16.8	34	73.9	14	41.2	3	21.4
Scrotal pain	186	1.8	67	36.0	44	65.7	18	40.9	2	11.1
Endometriosis	173	1.7	61	35.3	37	60.7	14	37.8	5	35.7
Hydronephrosis	158	1.5	48	30.4	28	58.3	12	42.9	0	0.0

Discussion

The summary of waivers for conditions specified by the DoDI medical systems indicated that only a few medical conditions are prevalent enough in the first-time Active Duty enlisted applicant population to meaningfully impact the operational accession needs of the military. Many of the identified medical conditions can be considered rare. Of the noted conditions, nearly a third of those disqualified seek a medical waiver, with nearly two thirds of those waiver requests being granted. These numbers appear to be fairly consistent throughout the top conditions that were examined for this study. Among the ten most prevalent conditions (>=19.5 per 10,000) accession ranged from 13% to 51% among those with waivers. Of these waived accessions, attrition remained consistent, averaging nearly (20%) for the most prevalent conditions investigated.

Previous AMSWG reports comparing the waived cohort to a fully qualified comparison group have found normal attrition rates to be around (12.5%) for all service branches. This top conditions summary indicates that the more prevalent waived conditions present in the applicant population account for a higher rate of attrition from service after one year, with the 10 most prevalent conditions (dermatitis, elevated BP w/o hypertensive, hypertension, cocaine, cannabis, vision, hearing, hernia, asthma, and pregnancy) all exhibiting attrition percentages above 17%.This is consistent with previous studies conducted by AMSARA[10].

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Audit of FY 2008 Army Existed Prior to Service Discharge Records Received by USMEPCOM and AMSARA

Authors: Janice K. Gary, Elizabeth R. Packnett, MPH, David N. Cowan, PhD, MPH, David W. Niebuhr, MD, MPH, MS.

Background

AMSARA receives documentation of military recruits being processed for discharge for medical conditions that Existed Prior to Service (EPTS) from USMEPCOM and from various Army training bases. A discharge for a medical condition can be classified as an EPTS discharge if the condition was verified to have existed before the recruit began service and if the complications leading to discharge arose no more than 180 days after the recruit began duty. EPTS discharges are given to recruits who, after enlistment, were found medically unfit for enlistment in accordance with medical fitness standards, and in the opinion of the evaluating physicians, the condition existed prior to service. These individuals are administratively discharged without veterans' benefits.

EPTS documents are shipped from all service training sites to USMEPCOM several times a year. This includes five Army sites (Fort Benning, Fort Jackson, Fort Knox, Fort Leonard Wood and Fort Sill), two Marines sites(Parris Island and San Diego), the Navy (Great Lakes), the Air Force (Lackland AFB) and the Coast Guard (Cape May). Only Army active duty EPTS records are evaluated for this report.

USMPECOM ships shadow copies of EPTS documents to AMSARA on a monthly basis. These records include but are not limited to: Report of Medical Examination DD Form, 2808, Report of Medical History DD Form 2807-1, Medical Prescreen of Medical History Report DD Form 2807-2, Entrance Physical Standards Board Proceedings DA Form 4707 and Chronological Record of Medical Care SF Form 600. AMSARA staff reviews all forms for completeness, and data from the forms is entered into an electronic database. These records have been the basis of all AMSARA reporting on EPTS discharges. These forms usually include final disposition. The final disposition of the reason for discharge is not included.

AMSARA also periodically receives shadow copies of EPTS documents from Army training bases. Usually only the Entrance Physical Standards Board Proceedings DA Form 4707 is shipped directly to AMSARA. The data from DA Form 4707 are entered into a separate database identical to the database used for forms from USMEPCOM. There should be a one-to-one match for each Army record. Since training sites are supposed to ship all EPTS records to USMEDPCOM, and since reporting to AMSARA is optional, each record from the Army training bases should also be reported by USMEPCOM. The working hypothesis was that all training base records would be also reported by USMEPCOM, while not all records reported from USMEPCOM would also be reported from the training bases. The purpose of this study is to quantify the agreement in reporting between records received from USMEPCOM and Army training bases.

Methods

EPTS records received from USMEPCOM and from Army training bases are abstracted and stored electronically in two separate but identical databases. Recruits with an EPTS medical evaluation within fiscal year 2008 (October 1, 2007-September 30, 2008) were included in this study. Dates of medical evaluation and recommendation for discharge are usually provided on Entrance Physical Standards Board Proceedings (DA Form 4707) or Chronological Record of Medical Care Form (SF 600). Because actual date of separation was not available we used the dates provided on the forms.

The USMEPPCOM and training base databases were merged by Social Security Number (SSN). Accession dates and medical evaluation dates, along with inter-service separation codes (ISC), obtained from Defense Manpower Data Center (DMDC) gain and loss file, were appended to unique records. It is possible for an individual to have more than one EPTS record (e.g., a person may be identified as pregnant, receive an EPTS, re-enter the Army, and receive an EPTS for another cause, all within the study period). These records were included for analysis. Records indicating that the individual was discharged after more than 180 days of service were excluded.

Results

Table 1.11 presents the number (and percent distribution) of EPTS records provided from each training base to USMEPCOM and directly to AMSARA. Of the records provided directly to USMEPCOM, Fort Benning and Fort. Leonard Wood sent the greatest percentages (28.4% and 26.5%, respectively), while Fort Jackson sent the greatest percentage of EPTS records (58.7%) received by AMSARA. Fort Jackson provided the highest percentage of unique EPTS discharge records (43.3%).

Table 1.11. Distribution of Source of EPTS Records received by USMEPCOM and AMSARA

	Records Received by USMEPCOM Records		Records Received by AMSARA		Unique Records	
Army Training Base	Count	% of total*	Count	% of total*	Count	% of total*
Fort Benning	858	28.4	132	4.3	889	20.3
Fort Jackson	688	22.8	1,813	58.7	1,894	43.3
Fort Knox	340	11.3	11	0.4	346	7.9
Fort Leonard Wood	801	26.5	815	26.4	878	20.1
Fort Sill	335	11.1	317	10.3	367	8.4
Total	3,022	100	3,088	100	4,374	100

* Percent of total received by MEPCOM, AMSARA, and Unique Records

Table 1.12 shows the percent of total records from each Army training base sent to USAMEPCOM only, AMSARA only, and both USAMEPCOM and AMSARA. Fort Jackson had the highest percentage of EPTS records (63.7%) transmitted to AMSARA only. Fort Leonard Wood and Fort Sill had the highest percentage of records (84.7% and 77.7%, respectively) sent to both USMEPCOM and Army training bases. Overall, Army training sites sent 29.4% of records to USMEPCOM only, 30.9% of records to AMSARA only, and 39.7% of records to both USMEPCOM and AMSARA. The 30.9% sent only to AMSARA represents under-reporting to the central data collection agency. Fort Jackson provided 89.2% of the total records shipped only to AMSARA.

TABLE 1.12 FY 08 DISTRIBUTION OF RECORDS SENT FROM EACH BASIC TRAINING BASE

	Sent to USMEPCOM only		Sent only to AMSARA		Sent to Both	
	Count	% of total*	Count	% of total*	Count	% of total*
Fort Benning	757	85.2	31	3.5	101	11.4
Fort Jackson	71	4.3	1,206	63.7	607	32.0
Fort Knox	335	96.8	6	1.7	5	1.4
Fort Leonard Wood	77	8.8	63	7.2	738	84.1
Fort Sill	50	13.6	32	8.7	285	77.7
Total**	1,286	29.4	1,352	30.9	1,736	39.7

* % of total records sent from each Army training base received by MEPCOM, AMSARA, and both
** Total number (and percent of all records) received by MEPCOM, AMSARA, and both

The number and percentage of unique records from the 2008 fiscal year with an Interservice Separation Code (ISC) obtained from DMDC loss records are reported in Table 1.13. Over 80% of records received by MEPCOM and AMSARA did not have an ISC code listed in the DMDC loss record, probably due to delays in processing and disposition. Among the records with an ISC the most common code reflected a general medical discharge, 'unqualified for active duty (other)'. None of the records captured by DMDC had an ISC code indicating that the individual was discharged for a medical condition existing prior to service. We were unable to examine DMDC records that were not first reported from MEPCOM or the training bases.

TABLE 1.13: INTERSERVICE SEPARATION CODE LISTED IN FY 2008 EPTS LOSS RECORDS FOR EPTS

	Received by USMEPCOM	Received by AMSARA
	Count	Count
Unknown	1	1
Conditions existing prior to service	-	-
Unqualified for active duty (other)	265	252
Failure to meet weight/body fat standards	1	-

Discussion

This study shows that 31% of EPTS discharge records generated by Army training bases are sent only to AMSARA and not to USMEPCOM. Thus, any analyses of USMEPCOM data must be interpreted cautiously. Fort Jackson provided 89.2% of the records sent only to AMSARA. The EPTS population cannot be adequately defined using existing data. In addition, this study has demonstrated that the quality of reporting to USMEPCOM varies between Army training bases.

The extreme variability EPTS records reported to USMEPCOM by different training bases (ranging from 50 to 757) raises issues regarding the number of EPTS records that may have been generated but never reported. At this point the frequency of any potential complete lack of reporting cannot be estimated.

It is also evident DMDC records do not classify EPTS discharges using the ISC which indicates 'conditions existing prior to service,' as none of the EPTS discharge records reported to USMEPCOM or AMSARA was coded by DMDC as having an EPTS discharge.

The extreme variability of inter-service and inter-training base reporting precludes meaningful analyses of the rates and risks of EPTS discharges. The variability in reporting may be causing severe biases in observed rates, risk, and associations if the under-reporting is selective. Because none of the EPTS records to USMEPCOM and AMSARA were coded as EPTS by DMDC, the interpretation of DMDC data is also problematic.

For the above reasons, all EPTS data from any source is of questionable validity, and a review/audit of the data capture and reporting systems, and policies and practices of assigning dispositions, should be conducted. As the data currently exist, incompleteness and errors prevent meaningful interpretation of rates of EPTS discharge, and reasons for all early discharge. These issues limit the DoD's ability to make evidence-based decisions and conduct policy analyses.

Department of Defense Instruction Comparison: Accessions vs. Deployment Medical Standards

Authors: Jenna D. Schwartz, MD; David W. Niebuhr, MD, MPH,

Background
In 2008, there were approximately 326,920 active, reserve, and National Guard enlisted applicants examined for medical fitness. Of these, about (8%) were initially disqualified for service due to permanently disqualifying medical conditions while another (10%) received disqualifications for conditions that could be remediated. Each service considers accession medical waivers for applicants with a disqualifying medical condition. While the accessions medical standards span 25 systems with 357 individual standards, the deployment medical standards span 15 systems with 32 individual standards. Overall, the deployment standards are more generalized and rely more heavily upon clinical judgment. Since those who are waived become part of the fighting forces with the high probability of deployment, it is important that the accessions standards are more comprehensive than the deployment medical standards such that young men and women entering the military are in prime health.

Methods
In order to determine the level of agreement and existing discrepancies between the accessions and deployment medical standards, we conducted a descriptive study examining the Department of Defense Instruction 6490.07 (DoDI) dated February 2010 deployment standards and the Department of Defense Instruction 6130.4 (DoDI) dated January 2005 accessions standards. We examined which systems and standards were found in both sets of medical standards as well as those found only in either the accessions or the deployment medical standards, and, among those standards found in both the accessions and deployment medical standards, we assessed which standard was more restrictive.

Results
Of the 25 total systems present in either (DoDI), 14 are incorporated into both sets of standards. On the standards level, 29 are present in both (DoDIs) out of 360 altogether in either (DoDI). Five conditions have more restrictive deployment than accession standards—head, syncope, seizure, cardiac arrhythmias, and dental. These standards were qualified based on specific requirements that may exist in a deployed setting with limited access to healthcare. For instance, the deployment standard for “head” includes preclusive psychiatric conditions while the accession standard enumerates only physical deformities. For syncope, the deployment standard is all-inclusive while the accession standard allows various exemptions. Similarly, the deployment standard for seizures provides no exemptions, and the accession standard states numerous criteria under which seizure disorder may be accepted. For cardiovascular arrhythmias, the deployment standards are more stringent since they disqualify for all dysrhythmias and arrhythmias while exceptions are present in the accession standards. Finally, the dental accession standard allows for recruits with six or less caries in anticipation of providing care to correct the deficiencies, but the deployment standard recognizes the austere environment in which the service member will be present and provides strict dental guidelines. Please refer to table one for further detail.

There are ten systems in only the accession standards and one in only the deployment standards. While accession standards specifically address eyes/ears, nose/sinuses/mouth/larynx, neck, gastrointestinal, female/male reproductive systems, urinary system, skin, hematopoietic disorders, sleep disorders, and a number of miscellaneous conditions such as history of heat or cold-related disorders, the deployment standard relies on

the judgment of the provider to weed out such disorders. Though not mentioned in the accession standards, the deployment standards specifically address immunizations or medications directly related to deployment such as anti-malarials or atropine/2-PAM chloride injections, disqualifying members who are unable to receive these. Additionally, though the accession standards are generally more detailed, the deployment standards are more specific with the definition of “coronary artery disease”, specifically disqualifying for “myocardial infarction” and “history of coronary artery surgery”. The accession standard, on the other hand, merely has one broad standard of “history of atherosclerotic coronary artery disease”. Though this encompasses the aforementioned conditions, it leaves room for misinterpretation or error in judgment.

TABLE 1.14 MORE RESTRICTIVE DEPLOYMENT STANDARDS

Condition	Accession	Deployment
Head	Deformities of the skull, face, or mandible of a degree that shall prevent the individual from the proper wearing of a protective mask or military headgear.	Physical or psychological conditions resulting in the inability to effectively wear personal protective equipment … if wearing such equipment may be reasonably anticipated or required in the deployed location.
Syncope	History of recurrent syncope and/or presyncope unless there has been no recurrence during the preceding 2 years while off all medication. Syncope or a traumatic loss of consciousness. History of recurrent syncope/presyncope does not meet the standard unless there has been no recurrence during the preceding 2 years while off all medications for treatment of this condition.	Recurrent loss of consciousness for any reason.
Seizure	Any seizure occurring beyond the 6th birthday, unless: Free of seizures for a period of 5 years while taking no medication for seizure control Normal sleep deprived EEG Normal neurology evaluation while taking no medications for seizure control	Seizure disorders
Cardiac Arrythmias	Supraventricular tachycardia: --meets standard if associated with an identifiable reversible cause and no recurrence during the preceding 2years while off all medications Wolff-Parkinson-White syndrome: --meets standard if successful ablative therapy with no recurrence of symptoms after 3 months and normal electrocardiograph Atrioventricular nodal reentrant tachycardia Atrioventricular reentrant tachycardia Pacemaker or defibrillator implantation Recurrent atrial fibrillation or flutter Premature atrial or ventricular contractions if: require treatment result in physical or psychological impairment	Cardiac dysrhythmias or arrhythmias, either symptomatic or requiring medical or electrophysiologic control (implanted defibrillator and/or pacemaker).
Dental	Temporomandibular disorders and/or myofascial pain. A minimum of 6 months healing time must elapse for any individuals completing surgical treatment of any maxillofacial pathology lesions. Six or more visually cavitated and/or carious teeth. Lack of a serviceable prosthesis that prevents adequate biting and chewing of a normal diet.	No dental exam in past 12 months. Anticipated dental emergency in next 12 months

Discussion

Overall, the accessions (DoDI) is more restrictive and specific than the deployment standards. It includes roughly 10 times more conditions, enumerating far more specifications. The only condition addressed solely in the deployment standards, immunizations/medications required for deployment, is specific to certain deployed environments. The (DoDI) for deployment is not intended to be all-inclusive. Rather, it sets the floor for medical personnel evaluating soldiers for deployment. Since it contains broader statements with more leniencies for individual provider interpretation for each situation, it relies heavily on provider judgment and individual medical assessment. However, the Combatant Commander has the final say and can restrict standards based on the particular characteristics of the theater of operations. Given the large margin for provider interpretation within the deployment standards, it is vital that providers, particularly those inexperienced with the deployed setting, are educated on that environment so appropriate decisions regarding deployment can be made and the numbers of service members evacuated from theater minimized.

Areas for future research will focus on conducting a comparison of the Department of Defense (DoD) deployment standards and United States Central Command (CENTCOM) Mod 10 deployment standards as well as an Army and Air Force comparison of medical deployment standards with retention standards. In general, Accession Medical Standards Analysis & Research Activity (AMSARA) is beginning to study the life cycle of the impact of the accession medical standards on deployability and retention with the overarching research question of whether accessions with medical disqualifications and medical waivers adversely impact that service member's ability to perform occupational requirements, be deployed, and be retained, and, if so, what are the implications of relaxing the accession standard to include health care utilization while in service.

2. PUBLICATIONS AND POSTER PRESENTATIONS

Association of Weight at Enlistment with Enrollment in the Army Weight Control Program and Subsequent Attrition in the Assessment of Recruit Motivation and Strength

Accepted to Military Medicine Vol. 175, March 2010

Authors: MAJ Sheryl A. Bedno; MAJ Christine E. Lang; William E. Daniell, MD, MPH; COL Andrew R. Wiesen; Bennett Datu, PhD, MPH; COL David W. Niebuhr

Introduction: The ongoing obesity epidemic has made recruiting qualified Army applicants increasingly difficult.

Methods: A cohort of 10,213 Army enlisted subjects was enrolled in the Assessment of Recruit Motivation and Strength (ARMS) study from February 2005 through September 2006. Overweight recruits obtained a waiver for enlistment (n=990) if they passed a screening physical fitness test. Recruits were evaluated for enrollment into the Army Weight Control Program (AWCP) and discharge during the 15 months following enlistment.

Results: Enrollment was higher among overweight recruits than recruits who met entrance standards (men: adjusted OR = 13.3 (95% CI: 10.3, 17.2), women: adjusted OR=3.6 (3.3, 3.9)).

Discussion: Although the discharge frequency was higher in the waiver group than in those who met standards (25.4% versus 19.9%, $p<0.001$), there were only ten (0.5% of total) discharges directly attributed to weight. Granting overweight waivers through the ARMS program increases enrollment to the AWCP but has little effect on weight-related attrition.

Exertional Heat Illness among Overweight US Army Recruits In Basic Training

Accepted to Aviation, Space, and Environmental Medicine Vol. 81, No 2 February 2010

Authors: Sheryl A. Bedno, MD, MPH, MS; Yuanzhang Li, PhD; Weiwei Han, MS; David N. Cowan, PhD, MPH; Christine T. Scott, MD, MPH; Melinda A. Cavicchia , MD, MPH; David W. Niebuhr, MD, MPH, MS

Introduction*:* Heat illness has not declined in the US military despite preventive measures. The increase in overweight recruits entering the US military may lead to an increase in heat-related events. This study compares the risk of heat illness among US Army recruits who exceeded body fat standards at accession to those who met standards.

Methods*:* Excess body fat and qualified applicants to the Army were required to take a pre-accession fitness test during the study period (February 2005 through September 2006). The test included a five minute step test and one minute push-up challenge, scored as pass or fail. Incidence and outpatient utilization for heat illness (any heat illness, heat stroke, heat

exhaustion, and other heat illness) at 90 days of service were compared between 826 excess body fat and 8841 qualified male recruits. There were too few heat events among women for analysis.

Results*:* The incidence odds ratio among male excess body fat recruits compared to qualified was 3.63 (95% CI: 1.92, 6.85). Excess body fat men had an increased utilization of heat illness with a rate ratio of 7.25 (95% CI: 4.17, 12.61).

Discussion*:* Although there were few heat illness events, the results indicate a significantly increased risk of heat illness and outpatient utilization among excess body fat male recruits. It was estimated that approximately (70%) of the relative risk for heat illnesses in excess body fat men during basic training was associated with exceeding body fat standards. These findings may have implications for military accession and training.

Body Mass Index, Attrition, and Reasons for Separation during the First Year of Army Service

Accepted for presentation at The Obesity Society Annual Meeting, Washington, DC, October 2009.

Authors: Elizabeth Packnett, MPH; David Niebuhr, MD, MPH, MS; Sheryl Bedno, MD, MPH. Melinda Cavicchia, MD, MPH; David Cowan*,* PhD, MPH

Purpose: To examine the association between BMI and medical from the Anny during the first year of service, especially among extremes of BMI.

Methods: A cohort study of was done to determine the relative risk of medical discharge as well as a cross sectional examination of reasons for separation, The study population consisted of soldiers who enlisted as active duty in the Army for the first time between January I. 2002 and December 31. 2006 and were medically discharged within one year, Analyses were stratified by gender to control for differences in body composition standards for each gender.

Results: BMI was found to be significantly associated with medical discharge in both males and females, the highest risk of medical discharge was observed in the underweight (RR=1.29, males; RR =1.26, females) and obese (RR = 1.33, males; RR = 1.31, females) BMI categories. The risk of medical discharge among the overweight was slightly elevated relative to normal weight soldiers (RR =1.14 males, RR 1.06 females). Underweight men and obese men were also more likely to experience disability discharges.

Conclusion: Interventions to minimize early attrition and prevent injury of underweight soldiers should be undertaken along with interventions targeted at overweight and obese soldiers.

Challenges in Estimating the Impact of Medical Conditions that Existed Prior to Military Entrance on Performance of Army Enlisted Personnel

Accepted for presentation at 13th Annual Force Health Protection Conference, Phoenix, Arizona, August 2010.

Authors: Janice K. Gary, Elizabeth R. Packnett, MPH; David N. Cowan, PhD, MPH; David W. Niebuhr, MD, MPH, MS

Purpose: US Military Entrance Processing Command (USMEPCOM) data is used to evaluate the impact of Existed Prior to Service (EPTS) medical conditions on the performance of military personnel. This study was conducted to evaluate the completeness of EPTS data received from USMEPCOM.

Methods: EPTS databases from two sources were compared to evaluate the data completeness.

Results: USMEPCOM provided 3,022 records and training bases 3,088, representing 4,374 unique EPTS discharges. Approximately 30% of training bases records were not transmitted to USMEPCOM, and 30% of USMEPCOM records were received without a corresponding record from the training base.

Conclusions: Valid data are required for developing good policy. The lack of completeness in EPTS data precludes meaningful characterization of the population of EPTS discharges as well as estimation of the risk of EPTS discharges, health care utilization, attrition, and disability retirement. Improvements in data quality are essential for making evidence-based medical accession standards policy.

Preliminary Analysis of US Army Disability Data

Accepted for presentation at 13th Annual Force Health Protection Conference, Phoenix, Arizona, August 2010.

Authors: Caitlin D. Blandford, MPH; Elizabeth R. Packnett, MPH; David N. Cowan, PhD, MPH; David W. Niebuhr, MD, MPH

Purpose: Army Physical Disability Authority (PDA) data is used to identify trends in the disability discharges of service members. This study was conducted as a review of the Army PDA data to determine the completeness of the data and to review and understand the disability process.

Methods: Data were restricted to years 2002-2008 (by year of Medical Examination Board (MEB) review date), first time active duty enlisted members, and to the first encounter. Records with a MEB date prior to the date of disability review were removed.

Results: Army PDA provided 77,156 records, representing an army service member's first encounter with the PEB. Musculoskeletal disorders remained the highest proportion of disability

records (54.9%) but an increase in psychiatric disorders was seen over time. The majority of records received a percent rating of 10% or less and an increase in 20-60% was seen over time. Nearly 60% of records received a severance pay upon discharge. There was an increase in temporary disability retirement and a decrease in separated without benefits discharge over time.

Conclusions: The changes in disability retirement discharges reflect the changing demands on the US's army personnel. Further study is needed to explore possible associations in these demands and disability within the US Army.

DoD Instruction Comparison: Accessions versus Deployment Medical Standards

Accepted for presentation at 13th Annual Force Health Protection Conference, Phoenix, Arizona, August 2010.

Authors: Jenna D. Schwartz, MD; David W. Niebuhr, MD, MPH, MS.

Purpose: Accessions standards provide a baseline for determining who is medically qualified to enter the armed forces. Since the majority of those who enter will be deployed, it is important that these standards are more comprehensive than those for deployment. This study was conducted to evaluate the concordance between the DoDI accessions and deployment medical standards.

Methods: The February 2010 deployment and January 2005 accessions standards were compared to evaluate the degree of concordance.

Results: Of the 25 total systems present in either DoDI, 14 are incorporated into both sets of standards for a 56% system level concordance. On the standards level, 29 are present in both DoDIs out of 360 altogether in either for an 8.1% standards level concordance.

Conclusions: The accessions DoDI is more restrictive and specific with roughly 10 times more conditions included while the deployment DoDI sets the floor for medical evaluation.

Lessons Learned in the Epidemiology of Injury form the Assessment of Recruit Strength and Motivation study ARMS) and Program

Authors: David N. Cowan, PhD, MPH; COL David Niebuhr, MD, MPH, MS; Nadia Urban, MHS; CPT Marlene Gubata, MD, MPH.

Accepted for presentation at 13th Annual Force Health Protection Conference, Phoenix, Arizona, August 2010.

Introduction: To increase the pool of eligible recruits the male body-fat percent (BF%) standard was relaxed, allowing several thousand additional men who could pass a fitness test (5-minute step-test and pushups challenge) to enlist.

Methods: We followed cohorts of fully-qualified (FQ) and exceeding-BF% (EBF) men entering from 2/05-9/06 and assessed their risk of attrition, heat illness, musculoskeletal injury, and health care utilization (HCU).

Results: We found no significant differences in attrition by 180 days. However, EBF men were significantly more likely to experience heat illness, heat stroke, musculoskeletal injury, and had a 40% higher rate of HCU. Nearly all injuries were minor and treated as outpatients. More than attrition must be considered in assessing the ARMS program, as EBF men had higher risks of illness and injury, and higher rates of HCU.

Conclusions: A cost-benefit assessment must be conducted evaluating the benefit of increased enlistees against the increased costs of illness, injury, and utilization.

A Comparison of CENTCOM versus DoD Instruction on Deployment Medical Standards

Accepted for presentation at 13th Annual Force Health Protection Conference, Phoenix, Arizona, August 2010.

Authors: Jenna D. Schwartz, MD; David W. Niebuhr, MD, MPH, MS

Purpose: The DoDI deployment medical standards set the floor for personnel evaluating fitness for deployment while CENTCOM standards are more specific to this area of operation. As such, CENTCOM standards should be more comprehensive in detailing medical disqualifiers. This study was conducted to evaluate the concordance between DoDI deployment and CENTCOM medical standards.

Methods: The February 2010 DoDI deployment standards and March 2010 CENTCOM standards were compared to evaluate the degree of concordance.

Results: Overall, there are 14 systems in both sets of standards and 20 in either set for a 70% system level concordance. Thirty-one standards exist in both and 41 total in either for a 76% standards level concordance.

Conclusions: Although the DoDI and CENTCOM medical standards for deployment are not intended to be all-inclusive, CENTCOM generally provides more detail, including more systems and standards and even incorporating a list of medications requiring waiver for use in theater.

Increased Risk of Heat Illness Among Male U.S. Army Recruits Exceeding Body Fat Standards

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Introduction: Heat illness continues to be a serious problem for those who work and train outdoors, including amateur and professional athletes, firefighters, and military service members. Obesity and low aerobic fitness are recognized risk factors for heat illness. Several civilian and military studies have examined body mass index or body fat (BF) as contributing factors to heat illness. The prevalence of obesity has been increasing in the US military.

Methods: This study compares the risk of heat illness among male US Army recruits who exceeded body fat standards and those who met standards after taking a preaccession physical fitness test. Applicants to the Army were required to take a fitness test during the study period, February 2005 through September 2006, consisting of a five minute step test and one minute push up test, scored as pass or fail. Heat illness endpoints included any heat illness, heat exhaustion, heat stroke, and other heat illness at 90 days of military service. Incidence and health care utilization (outpatient visits) was compared between 8841 qualified applicants and 826 men who exceed BF standards.

Results: The incidence rate ratio (RR) comparing qualified and those exceeding body fat standards was 3.63 (95% CI: 1.92, 6.85). Recruits exceeding BF had a significantly increased risk of utilization (RR: 7.25 (95% CI: (4.17, 12.61). There was no association between heat illness and body mass index (BMI) by group (qualified versus exceeding BF standards).

Discussion: There were relatively few heat events among this study cohort; however, there was a statistically significant risk of heat illness. The findings of this study suggest there may be an association between exceeding Army body fat standards and heat illness but further research is needed. This study may have implications for military accession and training for those who exceed body fat standards.

3. DESCRIPTIVE STATISTICS FOR APPLICANTS AND ACCESSIONS FOR ENLISTED SERVICE

The characteristics of the source populations applying for enlisted service in the Active Duty, Reserve, and National Guard components of the military are described from fiscal year 2004 to fiscal year 2009. For Active Duty applicants, subsequent accessions and attritions are also shown. An enlistee *applicant* is the individual who presents to a Military Entrance Processing Station (MEPS) for evaluation for acceptance into military service. An enlistee *accession* is the individual who has signed his or her oath of enlistment.

Except where otherwise noted, the following conventions apply:

- All references to year refer to fiscal year (FY).

- The “Accessions” shown in the following tables are from among the “Applicants” shown in the relevant preceding column. For example, columns showing fiscal year 2009 accessions are summarizing accessions only among individuals who applied for service in fiscal year 2009. Notation is made when complete follow-up is not available.

- Only data through fiscal year 2009 are included. Therefore, numbers and percentages gained (i.e. accessions) among applicants in 2009 refer only to those gained through September 30, 2009. For legitimate comparison of accession among applicants in 2009 and the previous five years, we calculated a within fiscal year accession rate, which takes into account only accessions that occurred in the same fiscal year as the MEPS physical. Therefore, when 2009 and 2004-2008 figures are compared, the follow up time for observing accessions will be comparable.

- Beginning in the FY 2010 Annual Report, enlistee applicants who subsequently accessed as officers (as indicated by a pay grade at gain of MO01-06), were included as applicants, but excluded from accessions. In previous Annual Reports, these individuals' MEPS data was included both in applicants and accessions. While these individuals represent less than (0.1%) of applicants overall, they are much more likely to hold a bachelors' or higher degree and to be over 30.

- To derive percentages and rates, data sets were merged at the individual level by Social Security Number (SSN). For example, in determining the percentage of individuals gained in 2009 who received a discharge, only discharges with a SSN matching a 2009 accession record SSN were included.

- Non-missing totals may vary slightly among tables depending upon the variable by which percentages or rates are presented. Records with a missing variable value used to calculate a percentage or rate in a given table are not included in that table, though the record may appear in other tables.

- Under the subsections titled “Active Duty Applicants at MEPS with Accession Records” and “Medical Waivers,” education level and age were obtained at the time of MEPS application because MEPS data are the only source of these variables for applicants. For subsections titled “Hospitalizations,” “Attrition,” “EPTS Discharges,” and “Disability Discharges among Army and Air Force Active Duty Enlistees,” age, education level, and Armed Forces Qualification Test (AFQT) score at time of accession are used. Under the

Delayed Entry Program, the application process can occur up to 2 years before the actual accession takes place.

- Beginning in the FY 2010 Annual Report, a more accurate calculation of age was used. This corrected an error in identifying the age of an applicant who presents to MEPS on his birthday, who using the previous calculation was sometimes recorded as a year younger. As a result of this change, more applicants were correctly categorized as 17-20.

- Temporary medical disqualifications are for conditions that can be remediated, such as being overweight or recently using marijuana. Permanent medical disqualifications are for all other disqualifying conditions described in DoD Instruction 6130.4.

- Beginning in the FY 2010 Annual Report, the ICD9 code 'V69.5', which indicates participation in delayed entry program (DEP), was not counted as a disqualification when occurring without other disqualifying ICD9 or OMF codes. These DEP participants may have been incorrectly classified as temporarily or permanently disqualified in previous Annual Reports.

- The Department of Defense Instruction (DoDI) 6130.3 was superseded by DoDI 6130.4 in 2005. This change is reflected in the coding of Existing Prior to Service (EPTS) discharge conditions beginning in 2006. The updated classification system incorporated several extensive revisions with codes corresponding to psychiatric disorders and orthopedic conditions being the most heavily impacted. Given the breadth and scope of disease reclassification, it is difficult, if not impossible, to directly compare EPTS data from 2006-2009 to data from previous years; therefore these data are presented in separate tables.

- The disease classification coding system outlined by DoDI 6130.3 is employed by the Navy and Marine Corps waiver authorities. At this time, there is no evidence to suggest that the Marine Corps has adopted the revised coding system and it is therefore possible to compare waiver data from 2009 to the same data from previous years. However, the Navy waiver authority began using a new coding system in 2006. Therefore, waiver data from 2006 through 2009 are not comparable to data from previous years.

- Beginning in the FY 2008 Annual report, the way International Classification of Diseases, 9th revision (ICD-9) codes are summarized was revised in order to establish more uniform granularity over the range of ICD-9 codes reported for MEPS disqualification and Army and Air Force waivers. This was done by selecting a subset of codes based on expert opinion that were exceptionally broad and reporting them to four digits rather than three (summarized in Table 3.1). For example, 493 is specific to asthma whereas 733 denotes a diverse array of bone and cartilage disorders, which include osteoporosis, pathologic fractures, bone cysts, and aseptic necrosis. Please note, when a majority of codes examined out to the fourth digit do not have a fourth digit (either due to insufficient information at time of coding or to errors) it is possible to have a three-digit code appear in the top-20 medical conditions tables, even though the raw codes were examined out to the fourth digit. Such codes are treated as a distinct category and are in no case to be considered a parent term if a more specific code is present. For example, the ICD-9 groups specified by 785 and 785.0 are mutually exclusive categories and the latter is not a subset of the former.

- Multiple MEPS applications from individuals to multiple components are retained but stored in separate datasets. Therefore, a single applicant may be represented in one, two, or all three of the component-specific MEPS application datasets. The number of applicants for each year in this annual report may be higher than that documented in the previous report and therefore Active Duty accession rates calculated in the current report will be lower than shown previously.

TABLE 3.1 LIST OF ICD-9 CODING GROUPS SUMMARIZED TO THE FOURTH DIGIT STARTING IN FY 2008 ANNUAL REPORT

ICD-9[†]	Condition
272	Disorders of lipoid metabolism
305	Nondependent abuse of drugs
306	Physiological malfunction arising from mental factors
307	Special symptoms or syndromes, not elsewhere classified
718	Other derangement of joint
719	Other and unspecified disorders of joint
724	Other and unspecified disorders of back
726	Peripheral enthesopathies and allied syndromes
733	Other disorders of bone and cartilage
746	Other congenital anomalies of heart
754	Certain congenital musculoskeletal deformities
756	Other congenital musculoskeletal anomalies
780	General symptoms
783	Symptoms concerning nutrition, metabolism, and development
784	Symptoms involving head and neck
785	Symptoms involving cardiovascular system
795	Other and nonspecific abnormal cytological, histological, immunological and DNA test findings
796	Other nonspecific abnormal findings
995	Certain adverse effects not elsewhere classified

[†]Differences in the level of coding specificity (3-digit vs. 4-digit) over time can lead to misleadingly large disparities in the incidence estimates for particular disease or condition categories when comparing current year data to the previous 5-year period. For example, if the code 272.0 is used in 2006 and 2007 where previously 272 was used, the top twenty condition categories for 2008 would appear to indicate that pure hypercholesterolemia is an emerging vs. established problem.

Active Duty Applicants at MEPS with Accession Records

Tables 3.2 through 3.9 describe the population of applicants who received medical examination and subsequent accessions for Active Duty enlisted service in the Army, Air Force, Navy, and Marine Corps. The number of applicants and the percentage of subsequent accession for these applicants from fiscal years 2004 to 2008 and fiscal year 2009 are shown in Table 3.2. The percentages of accessions are shown in two ways: 1) total accession through the end of fiscal year 2008 and 2) accessions occurring in the same fiscal year as application. Presentation of the average 'within fiscal year' accession rate is provided for the years 2004-2008 as a basis of comparison to the 'within fiscal year' accession rate for 2009.

TABLE 3.2 ACCESSIONS FOR ENLISTED APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION BY SERVICE: 2004-2008 VS. 2009

Service	2004 – 2008			2009	
	Applicants	Accession rate within fiscal year	Accession rate overall	Applicants	Accession rate within fiscal year
Army	409,783	48.3	62.2	104,406	44.8
Navy	242,412	34.9	69.8	57,785	26.3
Marines	215,058	44.2	73.7	47,597	33.6
Air Force	164,675	42.4	80.9	41,582	40.3
Total	1,031,928	-	-	251,370	-

The average within fiscal year accession rate for the Army was 48.3% in 2004-2008, slightly higher than the within fiscal year accession rate for the Army in 2009 (44.8%). The average within fiscal year accession rate for the Navy was (34.9%) in 2004-2008 while in 2009 the within fiscal year rate decreased to (26.3%). Similarly, in 2009 the within fiscal year accession rate for the Marines (33.6%) was much lower than the average within fiscal year accession rate from 2004 to 2008 (44.2%). Among Air Force applicants the within fiscal year accession rate was similar for 2009 as compared to prior years.

Table 3.3 shows the number of applicants for enlisted service by year for FY 2004-2009 and the associated accession counts and rates within one year and within two years following application. Regulations state that accessions must occur within one year of application, although it is fairly common for applicants to request and to be granted a one-year extension. Due to the lack of full two-year follow-up data for 2008 applicants and one year follow-up for 2009 applicants, the corresponding accession rates were underestimated (see note below Table 3.3). The accession rates within one year of application from 2004 to 2005 were lower than those rates for 2006-2008.

TABLE 3.3 ACCESSIONS WITHIN ONE AND TWO YEARS OF APPLICATION FOR ENLISTED APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2004-2009

Year of exam	Applicants	No. within 1 year of application	% within 1 year of application	No. within 2 years of application	% within 2 years of application
2004	201,506	111,115	55.1	120,072	59.6
2005	186,993	111,052	59.4	119,542	63.9
2006	208,342	143,928	69.1	152,177	73.0
2007	202,026	140,088	69.3	149,205	73.9
2008	233,061	159,771	68.6	167,430	71.8[†]
2009	251,370	94,730	37.7[†]	-	-
Total	1,283,298	760,684	-	708,426	-

[†] The proportion of applicants who accessed was underestimated due to a lack of sufficient follow-up data since only accessions through 2009 are reported in the above table.

Tables 3.4 through 3.8 show demographic characteristics (at time of application) and accession rates for the applicant pools in FY 2004-2008 and FY 2009. Most applicants in 2009 were male (82.6%), aged 17-20 years (64.8%), and white (73.9%, excluding applicants who declined to provide their racial status and those with missing records). Nearly one-quarter of applicants had not completed high school at the time of application (24.1%), many of whom are thought to be in the Delayed Entry Program (DEP). This demographic profile is consistent with the demographic profile of the applicants in 2004 through 2008 with the exception of education. Though the majority of applicants in both 2004-2008 (93.1%) and in 2009 (91.4%) had a high school diploma or less, the percentage of applicants with a high school diploma in 2009 (67.3%) was markedly higher than the percentage of applicants with a high school diploma in the preceding five fiscal years (63.1%). In addition, the percentage of applicants who were college graduates was higher in 2009 (4.3%) than in the period from 2004 to 2008 (2.7%). Demographic distributions of accessions largely reflect the applicant population with regard to gender, age, race, and education. Graduation from high school prior to accession among applicants who were high school seniors at the time of application accounts for many of the differences noted among these proportions between applicants and accessions. Additionally, slight differences may be seen between applicants and accessions on other demographic variables, though these differences are likely attributable to random fluctuations that occur from year to year.

TABLE 3.4 GENDER OF ENLISTED APPLICANTS WHO RECEIVED A MEDICAL EXAMINATION IN 2004-2008 VS 2009

Gender	2004 – 2008				2009			
	Applicants		Accessions		Applicants		Accessions	
	Count	%	Count	%	Count	%	Count	%
Male	845,561	81.9	599,215	88	207,535	82.6	78,744	83.1
Female	186,295	18.1	115,464	16.2	43,796	17.4	15,959	16.9
Total[†]	1,031,856	-	714,679	-	251,331	-	94,703	-

[†] Some individuals with a missing value for gender are included in the total.

TABLE 3.5 AGE OF ENLISTED APPLICANTS WHO RECEIVED A MEDICAL EXAMINATION IN 2004-2008 VS 2009

Age	2004 – 2008				2009			
	Applicants		Accessions		Applicants		Accessions	
	Count	%	Count	%	Count	%	Count	%
17 – 20	741,208	71.8	525,698	73.6	162,881	64.8	59,929	63.3
21 – 25	225,205	21.8	151,364	21.2	66,045	26.3	26,640	28.1
26 – 30	46,554	4.5	27,619	3.9	15,145	6.0	5,623	5.9
> 30	18,940	1.8	9,982	1.4	7,299	2.9	2,511	2.7
Total	1,031,928	-	714,680	-	251,370	-	94,703	-

TABLE 3.6 RACE OF ENLISTED APPLICANTS WHO RECEIVED A MEDICAL EXAMINATION IN 2004-2008 VS 2009

Race	2004 – 2008				2009			
	Applicants		Accessions		Applicants		Accessions	
	Count	%	Count	%	Count	%	Count	%
White	777,675	77.2	552,293	77.7	181,581	73.9	71,026	75.0
Black	145,254	14.4	99,099	13.9	38,511	15.7	14,114	14.9
Other	84,724	8.4	59,348	8.4	25,779	10.5	9,521	10.1
Missing or declined†	24,275	-	3,940	-	5,499	-	42	-
Total	1,031,928	-	714,680	-	251,370	-	94,703	-

† Note: New categories for race were available beginning in 2003. However, greater numbers of applicants chose not to indicate their race.

TABLE 3.7 EDUCATION LEVEL OF ENLISTED APPLICANTS WHO RECEIVED A MEDICAL EXAMINATION IN 2004-2008 VS 2009

Education	2004 – 2008				2009			
	Applicants		Accessions		Applicants		Accessions	
	Count	%	Count	%	Count	%	Count	%
Below HS Senior†	20,559	2.0	11,336	1.6	5,124	2.0	2,018	2.1
HS Senior	289,302	28.0	201,334	28.2	55,522	22.1	17,489	18.5
HS Diploma	651,650	63.1	457,129	64.0	169,106	67.3	67,005	70.8
Some College	42,174	4.1	28,169	3.9	10,899	4.3	4,400	4.6
Bachelor's and above	28,243	2.7	16,712	2.3	10,719	4.3	3,791	4.0
Total	1,031,928	-	714,680	-	251,370	-	94,703	-

† Encompasses the following: 1) those pursuing completion of the GED or other test-based high school equivalency diploma, vocational school, or secondary school, etc; 2) those not attending high school and who are neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school and is not yet a senior.

Table 3.8 shows the Armed Forces Qualification Test (AFQT) scores by percentile for applicants and accessions, comparing the time period of FY 2004 through FY 2008 to FY 2009. In 2009, the distribution of AFQT scores differed slightly from the distribution of AFQT scores in the previous five years. In 2009, a higher percentage of applicants scored in the 93rd-99th percentile (6.9%) relative to the previous five years (5.7%). In addition, a higher percentage of applicants scored in the 65th-92nd percentile in 2009 (38.2%) as compared to the previous five years (35.4%). The increases in the percent of applicants scoring in the highest percentiles

corresponded to a decrease in the percentage of applicants scoring in the 30th-49th percentile in 2009 (27.1%) relative to the previous five years (30%). Note that AFQT is a nationally normalized test, so the score distribution among all applicants would not necessarily mirror the percentile ranges. Applicants scoring in the 1st through 10th percentiles are barred from the medical examination process.

TABLE 3.8 AFQT SCORE CATEGORIES OF ENLISTED APPLICANTS WHO RECEIVED A MEDICAL EXAMINATION IN 2004-2008 VS 2009

AFQT score	2004 – 2008				2009			
	Applicants		Accessions		Applicants		Accessions	
	Count	%	Count	%	Count	%	Count	%
93 – 99	58,351	5.7	42,241	5.9	17,256	6.9	6,592	7.0
65 – 92	362,850	35.4	261,860	36.7	95,699	38.2	37,369	39.5
50 – 64	266,876	26.0	186,863	26.2	66,134	26.4	25,220	26.7
30 – 49	308,309	30.0	210,829	29.5	67,801	27.1	24,938	26.4
11 – 29†	29,991	2.9	11,713	1.6	3,556	1.4	422	0.4
< 11	637	-	21	-	82	-	7	-
Missing	4,914	-	1,153	-	842	-	155	-
Total	1,031,928	-	714,680	-	251,370	-	94,703	-

† Individuals scoring in the 10 percentile or lower are prohibited from applying. However, some exceptions are apparent.

The medical qualification status of applicants and accessions in FY 2009 as compared to applicants in the previous five years is shown in Table 3.9. The percentage of qualified applicants and accessions in 2009 is slightly higher than the overall percentage observed from 2004 to 2008. In 2009, (82.2%) of applicants and (89.2%) of accessions were classified as medically qualified for enlisted service compared to (80.3%) of applicants and (86.2%) of accessions from 2004 to 2008. The increase in fully qualified applicants in 2009 corresponded with a decrease in the percentage of temporary disqualifications (6.9%) relative to the previous five years (8.9%); the percentage of permanent disqualifications in 2009 was similar to that observed in the previous five years. Among accessions, the observed increase in fully qualified accessions in 2009 corresponded to a drop in both permanent medically disqualified accessions (5.9%) and temporary medically disqualified accessions (4.9%) relative to the previous five years.

TABLE 3.9 ACTIVE DUTY ENLISTED APPLICANTS WHO RECEIVED A MEDICAL EXAMINATION IN 2004-2008 AND 2009: MEDICAL DISQUALIFICATION

Medical status	2004 – 2008				2009			
	Applicants		Accessions		Applicants		Accessions	
	Count	%	Count	%	Count	%	Count	%
Fully qualified	828,770	80.3	616,398	86.2	206,658	82.2	84,485	89.2
Permanent	111,213	10.8	50,975	7.1	27,421	10.9	5,598	5.9
Temporary	91,945	8.9	47,307	6.6	17,291	6.9	4,620	4.9
Total	1,031,928	-	714,680	-	251,370	-	94,703	-

Reserve Applicants at MEPS without Accession Records

Tables 3.10 through 3.16 describe the characteristics of applicants for the enlisted Reserves of the Army, Navy, Marines, and Air Force. Data on Reserve applicants who underwent medical examinations at any MEPS are shown for the period from FY 2004 to FY 2008 in aggregate and separately for FY 2009. These results include only civilians applying for the Reserves and do not include direct accessions from Active Duty military.

The number of Reserve applicants, by service, between the years of 2004 and 2009 is shown in Table 3.10. Though the number of applicants varies from year to year, there is no trend in changes in the number of applicants in the Army and Marines. Among Navy Reservists, the number of applicants increased from 4,437 in 2004 to 7,374 in 2005 remained fairly consistent until 2009 when the number applicants decreased to 5,223. Air Force Reserve applicants increased in 2009 after remaining relatively stable from 2004 to 2008.

TABLE 3.10 RESERVE APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2004-2009: BY SERVICE

Year of Exam	Army	Navy	Marines	Air Force
2004	20,887	4,437	8,002	3,667
2005	19,181	7,374	7,525	3,088
2006	24,452	7,868	8,218	2,811
2007	23,168	7,775	7,383	2,687
2008	27,862	6,902	6,856	3,357
2009	26,835	5,223	8,309	5,316
Total	142,385	39,579	46,293	20,926

Tables 3.11 through 3.15 describe the demographics of Reserve applicants at MEPS. Most Reserve applicants in 2009 were male (74.9%), between the ages of 17 and 20 (61.0%), and white (74.2%), excluding applicants who declined to provide their racial status and those with missing records). The demographic profile of Reserve applicants in 2009 was consistent with that observed, in aggregate, over the past five years. It should also be noted that the proportion of Reserve applicants in 2009 who were classified as having an education beyond high school increased in 2009 relative to the previous five years; both in the category 'some college' (6.4% versus 4.7% in 2004-2009) and the category 'Bachelor's or higher' (5.1% versus 3.6% in 2004-2009)

TABLE 3.11 RESERVE APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2004-2008 AND 2009: GENDER

Gender	2004 - 2008 applicants		2009 applicants	
	Counts	%	Counts	%
Male	154,599	76.0	34,233	74.9
Female	48,863	24.0	11,438	25.0
Total†	203,462	-	45,671	-

† Some individuals with a missing value for gender are included in the total.

TABLE 3.12 RESERVE APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2004-2008 AND 2009: AGE

Age	2004 -2008 applicants		2009 applicants	
	Counts	%	Counts	%
17 – 20	140,108	68.8	27,860	61.0
21 – 25	40,276	19.8	10,800	23.6
26 – 30	12,316	6.1	3,779	8.3
> 30	10,796	5.3	3,244	7.1
Total	203,496	-	45,683	-

TABLE 3.13 RESERVE APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2004-2008 AND 2009: RACE

Race†	2004 - 2008 applicants		2009 applicants	
	Counts	%	Counts	%
White	143,760	76.1	31,435	74.2
Black	32,293	17.1	8,658	20.4
Other	12,809	6.8	2,247	5.3
Missing or unknown	14,638	-	3,343	-
Total	203,500	-	45,683	-

† Note: New categories for race were available beginning in 2003. However, greater numbers of applicants chose not to indicate their race.

TABLE 3.14 RESERVE APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2004-2008 AND 2009: EDUCATION LEVEL

Education	2004 - 2008 applicants		2009 applicants	
	Counts	%	Counts	%
Below HS Senior†	19,289	9.5	4,034	8.8
HS Senior	43,818	21.5	7,722	16.9
HS Diploma	123,359	60.6	28,667	62.8
Some College	9,641	4.7	2,939	6.4
Bachelor's and above	7,393	3.6	2,321	5.1
Total	203,500	-	45,683	-

† Encompasses the following: 1) those pursuing completion of the GED or other test-based high school equivalency diploma, vocational school, or secondary school, etc; 2) those not attending high school and who are neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school and is not yet a senior.

Table 3.15 shows the distribution of AFQT scores among enlisted Reserve applicants at MEPS. The distribution of AFQT percentile scores in 2009 is largely consistent with that observed in prior years. Most Reserve applicants in 2009 scored in the 65th to 92nd percentile (34.4%), however there was a decrease in percent of Reserve applicants who scored in the 11th to 29th percentile in 2009 (2.6%) relative to previous years (4.0%).

TABLE 3.15 RESERVE APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2004–2008 AND 2009: AFQT SCORE

AFQT Score	2004 - 2008 applicants		2009 applicants	
	Count	%	Count	%
93 – 99	11,849	5.9	2,888	6.3
65 – 92	69,017	34.3	15,675	34.4
50 – 64	50,422	25.1	11,557	25.4
31 – 49	61,698	30.7	14,198	31.2
11 – 29†	8,086	4.0	1,188	2.6
< 11	908	0.5	34	0.1
Missing	1,520	-	143	-
Total	203,500	-	45,683	-

† Individuals scoring in the 10th percentile or lower are prohibited from applying. However, some exceptions are apparent.

The medical qualification status of the applicants for enlisted reserve is shown in Table 3.16. Distribution of applicants among the three qualification status categories were nearly the same in 2009 as found in aggregate for the previous five years. In 2009 (80.3%) of applicants were considered as fully medically qualified, slightly higher than the percent of applicants who were fully qualified in the previous five years (78.7%); this increase corresponded to a small decrease in the percent of applicants who were temporarily disqualified in 2009 (7.8%) relative to the previous five years (9.6%)

TABLE 3.16 RESERVE APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2004-2008 AND 2009: MEDICAL DISQUALIFICATIONS

Medical status	2004 - 2008 applicants		2009 applicants	
	Count	%	Count	%
Fully qualified	160,143	78.7	36,703	80.3
Permanent	23,872	11.7	5,430	11.9
Temporary	19,485	9.6	3,550	7.8
Total	203,500	-	45,683	-

Army and Air National Guard Applicants at MEPS without Accession Records

In this section, the characteristics of applicants in the enlisted National Guard of the Army and Air Force are described. The Navy and Marines do not have a National Guard component. These tables include National Guard applicants who received a medical examination at MEPS in FY 2004 through FY 2008 (in aggregate) and FY 2009. Civilian applicants are the only National Guard applicants included in these tables. Direct accessions from the Active Duty military into the National Guard are not included.

The number of applicants to the Army and Air National Guard for each year between 2004 and 2009 are shown in Table 3.17. There were considerably more Army National Guard applicants between 2006 and 2009 compared to previous years. The number of Air National Guard applicants decreased temporarily in 2004 and 2005 but increased in 2006 and 2008 to counts previously observed continued to increase in 2009 with 7,809 applicants.

TABLE 3.17 ARMY AND AIR NATIONAL GUARD APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2004-2009: BY SERVICE

Year of Exam	Army National Guard	Air National Guard
2004	33,470	4,221
2005	34,609	3,801
2006	51,590	4,704
2007	51,220	4,873
2008	56,400	6,633
2009	49,057	7,809
Total	276,346	32,041

Tables 3.18 through 3.22 describe the demographics of National Guard applicants for the year 2009 relative to the aggregate demographic characteristics of applicants between 2004 and 2008. In 2009, most applicants were male (79.2%), aged 17-20 (60.7%), and white (79.9%), excluding applicants who declined to provide their racial status and those with missing records), whose highest attained education (at application) was a high school diploma (62.0%). The gender and race for Army and National Guard applicants in 2009 was similar with that observed, in aggregate, over the previous five years. However, in 2009 a higher percentage of applicants to National Guard were older and had education beyond college relative to the previous years.

TABLE 3.18 ARMY AND AIR NATIONAL GUARD APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2004-2008: AND 2009: GENDER

Gender	2004 - 2008 applicants		2009 applicants	
	Count	%	Count	%
Male	195,821	77.9	45,014	79.2
Female	55,653	22.1	11,827	20.8
Total†	251,474	-	56,841	-

† Some individuals with a missing value for gender are included in the total.

TABLE 3.19 ARMY AND AIR NATIONAL GUARD APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2004-2008 AND 2009: AGE

Age	2004 - 2008 applicants		2009 applicants	
	Count	%	Count	%
17 – 20	171,776	68.3	34,538	60.7
21 – 25	51,226	20.4	14,270	25.1
26 – 30	16,209	6.4	4,793	8.4
> 30	12,305	4.9	3,265	5.7
Total	251,516	-	56,866	-

TABLE 3.20 ARMY AND AIR NATIONAL GUARD APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2004-2008 AND 2009: RACE

Race†	2004 - 2008 applicants		2009 applicants	
	Count	%	Count	%
White	188,985	78.4	43,576	79.9
Black	31,174	12.9	7,121	13.1
Other	20,816	8.6	3,832	7.0
Missing or Declined	10,546	-	2,337	-
Total	251,521	-	56,866	-

† New categories for race were available beginning in 2003. However, greater numbers of applicants chose not to indicate their race.

TABLE 3.21 ARMY AND AIR NATIONAL GUARD APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2004-2008 AND 2009: EDUCATION LEVEL

Education	2004 - 2008 applicants		2009 applicants	
	Count	%	Count	%
Below HS Senior†	40,616	16.1	7,909	13.9
HS Senior	51,442	20.5	8,415	14.8
HS Diploma	143,594	57.1	35,237	62.0
Some College	9,440	3.8	2,799	4.9
Bachelor's and above	6,429	2.6	2,506	4.4
Total	251,521	-	56,866	-

† Encompasses the following: 1) those pursuing completion of the GED or other test-based high school equivalency diploma, vocational school, or secondary school, etc; 2) those not attending high school and who are neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school and is not yet a senior.

Table 3.22 shows the distribution of AFQT scores among Army and Air National Guard enlistee applicants. In 2009, the observed percentage of applicants with AFQT scores in the 50th percent or higher (72.1%) than in the previous five year period (56.2%).

TABLE 3.22 ARMY AND AIR NATIONAL GUARD APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2004-2008 AND 2009: AFQT SCORE

AFQT Score	2004 - 2008 applicants		2009 applicants	
	Count	%	Count	%
93 – 99	11,117	4.5	3,431	6.1
65 – 92	72,299	29.0	20,871	36.9
50 – 64	56,672	22.7	16,440	29.1
30 – 49	93,182	37.3	14,020	24.8
11 – 29†	16,326	6.5	1,735	3.1
< 11	355	0.1	44	0.1
Missing	1,570	-	325	-
Total	251,521	-	56,866	-

† Individuals scoring in the 10th percentile or lower are prohibited from applying, although some exceptions are apparent.

The medical qualification status of National Guard applicants is shown in Table 3.23 for the year 2009 and the years 2004 through 2008. Most applicants in 2009 were classified as medically qualified (75.9%), the percentage was slightly increased from (72.1%) for the previous five years. In 2009 of those who were disqualified based on a medical condition, the proportion of applicants with a permanent disqualification was (12.2%) and temporary disqualification was (11.9%).

TABLE 3.23 ARMY AND AIR NATIONAL GUARD APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2004-2008 AND 2009: MEDICAL DISQUALIFICATIONS

Medical status	2004 - 2008 applicants		2009 applicants	
	Count	%	Count	%
Fully qualified	181,234	72.1	43,144	75.9
Permanent	35,499	14.1	6,965	12.2
Temporary	34,788	13.8	6,757	11.9
Total	251,521	-	56,866	-

Medical Disqualifications among Applicants for First-Time Active Duty Enlisted Service

Table 3.24 shows the medical disqualifications among applicants for Active Duty enlisted service during the period between FY 2004 and FY 2008, and separately for FY 2009 according to the ICD-9 code assigned to each disqualifying condition. Within this table, the number of disqualifications for a given condition is provided along with the percentage of disqualified individuals receiving the disqualification and the incidence of the disqualification among all MEPS applicants. These conditions are ranked according to the number of disqualifications in 2009. Some disqualified individuals have more than one disqualifying medical condition; therefore the number of disqualifications is greater than the number of disqualified individuals. As previously mentioned, some codes[1] are summarized at the 4th digit to help maintain a comparable level of coding specificity across the ICD-9 categories[2].

The most frequent disqualifying conditions, exceeding the weight/body fat limits and nondependent *Cannabis* abuse, are considered temporary disqualifications and can be remedied. Exceeding the weight/body fat limits was the most common reason for medical disqualification in 2009, accounting for (15.6%) of disqualified individuals, which is nearly the same as applicants disqualified for the same condition (17.4%) in 2004 through 2008. Nondependent abuse of *Cannabis* is the second most common medical disqualification observed, with (5.0%) of individuals disqualified for this reason in 2009. This percentage is down from (9.4%) in 2004 through 2008. The incidence of disqualifications for obesity/overweight (exceeding weight/body fat limits) is lower in 2009 (3,749 per 100,000 applicants) compared to the previous five years (4,353 per 100,000 applicants). During this same period, the incidence of disqualifications for *Cannabis* abuse per 100,000 MEPS applicants decreased from 2,343 in 2004-2008 to 1,208 in 2009. Disorders of refraction and accommodation (4.5%) and hearing deficiencies (3.6%) were the third and fourth most common disqualifications among Active Duty applicants in 2009. Both conditions are permanently disqualifying. The proportion of disqualifications for asthma, the fifth most common disqualification, is slightly lower in 2009 (2.2%) than in previous years (2.7%). Elevated blood pressure reading without the presence of a hypertension diagnosis represented the sixth leading cause for medical disqualification in 2009 (2.0%). There were two conditions that accounted for a notably less proportion of all medical disqualifications in 2009 compared to the previous five years. Nondependent Cocaine abuse accounted for 0.2% (52 / 100,000) of all medical disqualifications in 2009 compared to 1.4% (355 / 100,000) the previous five years. Other and unspecified disorders of bone and cartilage accounted for 0.6% (136 / 100,000) of all medical disqualifications in 2009 compared to 2.2% (543 / 100,000) the previous five years. Nondependent amphetamine abuse increased from 0.3% of all medical disqualifications and an incidence rate of only 75 / 100,000 MEPS applicants in 2004-2008 to 0.5% of all medical disqualifications in 2009 with an incidence rate of 109 / 100,000 MEPS applicants.

[1] Selected ICD-9 codes are summarized in Table 3.1.

[2] For a variety of reasons including data extraction and entry, some codes belonging to the groups outlined in Table 3.1 may not have a fourth digit. When summarized, these three-digit codes are a distinct category from related four-digit categories. See page 30 paragraph 6.

TABLE 3.24 MEDICAL DISQUALIFICATIONS CATEGORIES OF FIRST-TIME ACTIVE DUTY ENLISTED APPLICANTS BY ALL ICD-9 CODES: 2004–2009

Group (ICD-9)	Condition[†]	2004-2008			2009		
		n	% of DQ apps[‡]	n / 100k apps[§]	n	% of DQ apps[‡]	n / 100k apps[§]
278	Obesity and other hyperalimentation	44,918	17.4	4,353	9,423	15.6	3,749
305.2	Nondependent Cannabis abuse	24,181	9.4	2,343	3,037	5.0	1,208
367	Disorders of refraction and accommodation	10,507	4.1	1,018	2,731	4.5	1,086
389	Hearing deficiency	9,873	3.8	957	2,186	3.6	870
493	Asthma	6,973	2.7	676	1,334	2.2	531
796.2	Elevated blood pressure reading without a diagnosis of hypertension	3,178	1.2	308	1,178	2.0	469
783.2	Abnormal loss of weight	6,214	2.4	602	1,143	1.9	455
300	Anxiety, dissociative, and somatoform disorders	4,133	1.6	401	1,050	1.7	418
791.0	Proteinuria	3,592	1.4	348	544	0.9	216
314	Hyperkinetic syndrome of childhood	3,336	1.3	323	666	1.1	265
692	Contact dermatitis and other eczema	2,238	0.9	217	658	1.1	262
401	Hypertension	3,592	1.4	348	544	0.9	216
521	Diseases of hard tissue of teeth	1,552	0.6	150	506	0.8	201
550	Inguinal hernia	2,046	0.8	198	448	0.7	178
752	Congenital anomalies of genital organs	1,162	0.5	113	442	0.7	176
737	Deviation and curvature of spine	1,672	0.6	162	413	0.7	164
785.1	Palpitations	297	0.1	29	389	0.6	155
783.1	Abnormal weight gain	1,323	0.5	128	386	0.6	154
311	Depression, not elsewhere classified	1,772	0.7	172	367	0.6	146
733	Other and unspecified disorders of bone and cartilage	5,604	2.2	543	341	0.6	136
305.7	Amphetamine or related acting sympathomimetic abuse	770	0.3	75	274	0.5	109
272.9	Unspecified disorder of lipoid metabolism	315	0.1	31	222	0.4	88
305.6	Nondependent cocaine abuse	3,666	1.4	355	131	0.2	52
N/A	Individuals with one or more conditions that are not specified above	113,750	44.2	11,023	30,990	51.5	12,328
	Total applicants at MEPS	1,031,928			251,370		
	Total of disqualified applicants	257,461			60,233		

[†] Condition categories (ICD-9 groups) are not mutually exclusive, in 2003-2007.

[‡] Indicates the percentage of medically disqualified MEPS applicants for the specified condition.

[§] Indicates the number of individuals with the specified condition for every 100,000 applicants screened at MEPS.

Table 3.25 shows the medical disqualifications among applicants for Active Duty enlisted service during the period between FY 2004 and FY 2008, and separately for FY 2009 according to Objective Medical Findings (OMF) codes provided by US Military Entrance Processing Command (USMEPCOM). These conditions are ranked according to the number of disqualifications in 2009. Some disqualified individuals have more than one disqualifying medical condition; therefore, the number of disqualifications is greater than the number of individuals disqualified.

As was observed in the more specific categorization presented in Table 3.24, body composition and drug use are the leading categories for disqualification; these are generally considered temporary disqualifying conditions that can be remediated by the applicant without need for an accession medical waiver.

TABLE 3.25 MEDICAL DISQUALIFICATIONS OF FIRST-TIME ACTIVE DUTY ENLISTED APPLICANTS BY ALL LISTED USMEPCOM FAILURE CODES: 2004 - 2009

Group (OMF)	Condition†	2004-2008			2009		
		n	% of DQ apps‡	n / 100k apps§	n	% of DQ apps‡	n / 100k apps§
54	Weight, body build	52,690	22.9	5,106	11,065	21.1	4,402
55	Body fat percentage	5,696	2.5	552	3,768	7.2	1,499
40	Psychiatric	15,299	6.6	1,483	3,572	6.8	1,421
50	Drugs	26,819	11.7	2,599	2,886	5.5	1,148
38	Skin, lymphatic, allergies	10,104	4.4	979	2,714	5.2	1,080
62	Refraction	9,023	3.9	874	2,302	4.4	916
28	Lungs and chest (includes breasts)	10,095	4.4	978	2,295	4.4	913
34	Lower extremities (except feet)	12,600	5.5	1,221	2,189	4.2	871
31	Abdomen and viscera (include hernia)	6,244	2.7	605	1,789	3.4	712
33	Upper extremities	9,747	4.2	945	1,759	3.4	700
58	Blood pressure	6,608	2.9	640	1,666	3.2	663
32	External genitalia (genitourinary)	5,507	2.4	534	1,592	3.0	633
27	Heart	3,590	1.6	348	1,104	2.1	439
35	Feet	5,020	2.2	486	909	1.7	362
23	Eyes - general (visual acuity and refraction)	4,110	1.8	398	902	1.7	359
39	Neurologic	3,671	1.6	356	898	1.7	357
36	Spine, other musculoskeletal	3,861	1.7	374	766	1.5	305
57	Pulse	2,641	1.1	256	743	1.4	296
46	Positive urine test for pregnancy	3,145	1.4	305	619	1.2	246
52	Other tests	1,109	0.5	107	510	1.0	203
N/A	Individual with one or more conditions that are not specified above	32,610	14.2	3,160	8,396	16.0	3,340
	Total Apps at MEPS	1,031,928			251,370		
	Total disqualified applicants	230,189			52,444		

† Condition categories (ICD-9 groups) are not mutually exclusive, in 2003-2007.

‡ Indicates the percentage of medically disqualified MEPS applicants for the specified condition.

§ Indicates the number of individuals with the specified condition for every 100,000 applicants screened at MEPS

Accession Medical Waivers

Applicants who receive a permanent medical disqualification at the MEPS may be granted an accession medical waiver for the disqualifying condition(s) from a service-specific waiver authority. This section summarizes the numbers of waiver considerations from 2004 to 2009. Part I examines all waiver consideration records for first time applicants to Active Duty service regardless of whether or not there is a corresponding Defense Manpower Data Center (DMDC) accession record. Thus, this section addresses the spectrum of waiver applications seen by the waiver authorities. Part II examines only those waiver records for which there is a matching accessions record in the DMDC data. This section describes the medically disqualifying conditions among Active Duty enlistees who accessed after receiving an accession medical waiver.

Individuals frequently have multiple records of waiver consideration by the same service waiver authority, likely reflecting resubmissions, perhaps with additional information. Only the earliest record for each individual for a particular service was considered in the following analyses. Therefore, the numbers of considerations do not reflect the overall workload of waiver authorities. Note that a waiver application denied by one waiver authority might be submitted to another. In such a case, the individual would be counted twice in the tables.

Part I: Medical waivers irrespective of an accession record

Accession medical waiver considerations for Active Duty enlisted applicants in 2004-2009 are summarized for the Army, Navy, Marines, and Air Force in this section. All waiver considerations are included regardless of whether AMSARA has a corresponding MEPS record or whether the individual subsequently became an accession. Note that only waiver applications are summarized, and those applicants who are granted waivers may not necessarily become accessions. Table 3.26 shows the raw count of waiver considerations and approval percentages by branch of service and year of waiver decision. Approval percentages represent the proportion of the total waivers considered, listed in the tables as “Count”, subsequently approved. Note that a waiver can be denied by one service’s waiver authority but granted by another, so the potential for counting individuals twice cannot be excluded. A change in coding prevents the direct comparison of Navy waiver data from 2006 and later to previous years. Aggregate data for the period of 2004-2005 is presented for the Navy while 2006-2008 compared to 2009 are tabulated separately.

TABLE 3.26 WAIVER CONSIDERATIONS FOR ACTIVE DUTY APPLICANTS BY YEAR AND SERVICE

Year	Army		Navy		Marines		Air Force	
	Count	% Approved	Count	% Approved	Count	% Approved	Count	% Approved
2004	12,819	59.3	5,068	59.6	3,199	65.7	2,723	60.7
2005	12,019	57.5	5,479	68.6	3,636	69.8	1,413	50.5
2006	13,098	59.3	6,001	72.9	4,085	66.0	2,333	51.1
2007	13,131	68.0	5,776	71.7	4,629	68.7	1,982	52.8
2008	16,619	73.2	6,032	58.0	4,774	65.4	2,327	61.7
2009	17,940	66.5	5,755	53.1	4,413	60.6	3,177	69.4
Total	85,626	-	34,111	-	24,736	-	13,955	-

There are no apparent trends in the numbers of waiver applications considered by the Army, Navy, and Air Force waiver authorities in 2004 through 2009. Applications considered by the Marines was lowest in 2004 (3,199) but reached 4,629 in 2007 and 4,774 in 2008. With few exceptions, the within-service approval rates for the Marines and Air Force has been consistent through the years examined. Army approval rates were consistent from 2004 to 2006, but sharply increased in 2007. An increase in the waiver approval rate is apparent in the Navy from 2004 to 2007 but the approval rate dropped to (58.0%) in 2008 and to (53.1%) in 2009.

Tables 3.27 through 3.30 show the medical conditions for which waivers were considered and granted ranked by waivers most commonly applied for in between 2004-2009, for each branch of service. Individuals may be considered for multiple conditions; therefore the total number of conditions exceeds the number of individuals evaluated. Waiver considerations from the years 2004 to 2008 are shown in aggregate to facilitate the comparison of waivers in 2009 to previous years. Medical condition categories for the Army and Air Force were created using ICD-9 code(s) assigned to each waiver record. Navy (2005 and prior) and Marine Corps waiver authorities employ a limited subset of the ICD-9 classification scheme, which is defined in DoDI 6130.3. In 2006 and later, code usage by the Navy waiver authority indicates the use of a hybrid system between DoDI 6130.3 and DoDI 6130.4.

Enlisted medical accession waiver considerations and approvals for the Army are shown in Table 3.27. Hearing deficiency was the most common medical disqualification for which waivers were sought in 2009, accounting for (9.2%) of waivers sought. As in previous years, the second most common condition for which accession medical waivers were sought was disorders of refraction and accommodation, representing (8.7%) of waiver applicants in 2009. While applications for hearing deficiency and disorders of refraction and accommodation are still the leading two waivers sought by Army applicants, these conditions represent a slightly smaller proportion of total waiver applicants than in the previous five-year period. Consistent with previous observations suggesting that disqualifications for asthma at MEPS are decreasing, only (3.8%) of waiver applicants sought a waiver for this condition in 2009 as compared to (4.8%) in the preceding five year period, in which it was the third most common waiver applied for. This observation may be the result of relaxed accession standards for asthma in June 2004.

TABLE 3.27 TOP CONDITIONS FOR ENLISTED ACCESSION WAIVERS CONSIDERED IN 2004–2008 VS. 2009: ARMY

ICD-9	Condition[†]	2004-2008				2009			
		Applied		Approved		Applied		Approved	
		Count	% of all apps[‡]	Count	% of apprvd apps[§]	Count	% of all apps[‡]	Count	% of apprvd apps[§]
389	Hearing loss, unspecified	6,774	10	3,287	7.6	1,647	9.2	774	6.5
367	Disorders of refracton and accommodation	5,517	8.2	4,254	9.8	1,559	8.7	1,275	10.7
796.2	Elevated blood pressure reading without diagnosis of hypertension	3,003	4.4	2,971	6.8	816	4.5	779	6.5
272.9	Lipoid metabolism, unspecified disorder of	964	1.4	927	2.1	767	4.3	686	5.8
300	Anxiety, dissociative and somatoform disorders	2,239	3.3	960	2.2	742	4.1	271	2.3
493	Asthma	3,267	4.8	1,548	3.6	689	3.8	336	2.8
995	Certain adverse effects not elsewhere classified[‡‡]	1,059	1.6	858	2	526	2.9	428	3.6
272	Disorders of lipoid metabolism	520	0.8	467	1.1	431	2.4	383	3.2
790	Nonspecific findings on examination of blood	431	0.6	386	0.9	400	2.2	341	2.9
305	Nondependent drug abuse, unspecified	1,064	1.6	542	1.2	395	2.2	187	1.6
272.0	Pure hypercholesterolemia	586	0.9	567	1.3	381	2.1	333	2.8
521	Diseases of hard tissues of teeth	869	1.3	625	1.4	379	2.1	337	2.8
272.1	Pure hyperglyceridemia	426	0.6	390	0.9	368	2.1	317	2.7
272.5	Lipoprotein deficiencies	299	0.4	282	0.7	348	1.9	308	2.6
692	Contact dermatitis and other eczema	880	1.3	712	1.6	341	1.9	253	2.1
312	Disturbance of conduct, not elsewhere classified	436	0.6	210	0.5	306	1.7	160	1.3
314	Hyperkinetic syndrome of childhood	1,195	1.8	850	2	266	1.5	161	1.3
746	Depressive disorder, not elsewhere classified	640	0.9	342	0.8	256	1.4	180	1.5
429.9	Heart disease, unspecified	206	0.3	187	0.4	232	1.3	205	1.7
	Total waivers considered	67,686				17,940			
	Total decisions rendered[††]	67,686				17,940			
	Total of approved waivers	43,383 (64.1%)				11,929 (66.5%)			

[†] Condition categories (ICD-9 groups) are not mutually exclusive.

[‡] Indicates the percentage of waiver applicants for the specified condition category.

[§] Indicates the percentage of approved waiver applicants for the specified condition category.

[††] Waiver applications for which a decision (granted vs. denied) is not known are not included in this total.

[‡‡] Codes in this category typically include unspecified allergies and anaphylactic shock.

Enlisted medical accession waiver considerations and approvals for the Navy are shown in Table 3.28. Conditions in 2004-2005 are coded according to the DoDI 6130.3 whereas a hybrid of the DoDI 6130.3 and DoDI 6130.4 appears to be in use after 2005. Therefore, data for 2004-2005 are not presented; only data for 2006-2008 compared to 2009 are tabulated. In 2009, the most commonly sought waivers were for myopia (9.5%), hearing deficiency (7.1%), asthma (4.7%), and elevated blood pressure without hypertension (4.7%). Elevated blood pressure without hypertension increased in prevalence in 2009 (4.7%) relative to 2006-2008 when only (2.5%) of waiver applications were for elevated blood pressure without hypertension in 2006-2008. Myopia also increased in prevalence among waiver applicants in 2009 (9.5%) as compared to 2006-2008 (7.6%). In 2006, less than half of all waiver records for the Navy provided a diagnosis code, resulting in a distribution of waiver categories for 2006-2008 that is different from 2009.

TABLE 3.28 TOP CONDITIONS FOR ENLISTED ACCESSION WAIVERS CONSIDERED IN 2006-2008 VS. 2009: NAVY

Condition[†]	2006-2008[‡]				2009			
	Applied		Approved		Applied		Approved	
	Count	% of all apps[§]	Count	% of apprvd apps[††]	Count	% of all apps[§]	Count	% of apprvd apps[††]
Myopia	1,354	7.6	917	7.6	545	9.5	125	4.1
Hearing deficiency	1,080	6.1	488	4.1	411	7.1	152	5.0
Asthma	975	5.5	665	5.5	272	4.7	71	2.3
Elevated blood pressure reading without a diagnosis of hypertension	451	2.5	402	3.3	270	4.7	174	5.7
Other anaphylactic shock	226	1.3	186	1.5	258	4.5	59	1.9
Neurotic, mood, somatoform, dissociative, or factitious disorder	78	0.4	46	0.4	180	3.1	116	3.8
Palpitations/tachycardia	284	1.6	247	2.1	148	2.6	15	0.5
Fitting and adjustment of other device, orthopedic devices	26	0.1	21	0.2	147	2.6	108	3.5
Eczema	291	1.6	175	1.5	134	2.3	35	1.1
Hyperkinetic syndrome of childhood	296	1.7	223	1.9	120	2.1	76	2.5
Refractive surgery	351	2.0	315	2.6	107	1.9	93	3.0
Nondependent drug abuse	116	0.7	69	0.6	95	1.7	46	1.5
Proteinuria	4	0.0	3	0.0	87	1.5	30	1.0
Depression Disorder NOS	274	1.5	198	1.6	78	1.4	42	1.4
Internal derangement, Knee	34	0.2	25	0.2	76	1.3	313	10.3
Deviation or curvature of spine	263	1.5	123	1.0	64	1.1	10	0.3
Unspecified diseases of the hard tissues of teeth	4	0.0	3	0.0	53	0.9	5	0.2
Other psoriasis	116	0.7	54	0.4	48	0.8	209	6.8
Open wound of genital organs (external), including traumatic amputation, scrotum and testes	56	0.3	44	0.4	47	0.8	40	1.3
Late effect of fracture of lower extremities	89	0.5	64	0.5	44	0.8	22	0.7
Individuals with one or more conditions that are not specified above	1,354	7.6	917	7.6	545	9.5	125	4.1
Total waivers considered	17,809				5,755			
Total decisions rendered[‡‡]	15,727				4,822			
Total of approved waivers	12,014 (67.5%)				3,053 (53.0%)			

[†] Condition categories (Navy waiver codes) are not mutually exclusive.

[§] Indicates the percentage of waiver applicants for the specified condition category.

[††] Indicates the percentage of approved waiver applicants for the specified condition category.

[‡‡] Waiver applications for which a decision (granted vs. denied) is not known are not included in this total.

Table 3.29 shows the leading conditions for which waivers were considered by the Marine Corps waiver authority. The most common condition for which accession medical waivers were sought by enlisted Marine applicants in 2009 was for nonspecific abnormal findings (11.3% of waiver applicants), myopia (10.4%), hearing deficiency (8.7%), asthma (5.9%), and neurotic, mood, somatoform, dissociative, and factitious disorders (5.5%). Overall, the percentage of wavier applicants for each of the leading five conditions decreased relative to the previous five years. In addition, myopia surpassed hearing deficiency as the second leading condition precipitating waiver application in 2009.

TABLE 3.29 TOP CONDITIONS FOR ENLISTED ACCESSION WAIVERS CONSIDERED IN 2004–2008 VS. 2009: MARINES

DoDI	Condition[†]	2004-2008				2009			
		Applied		Approved		Applied		Approved	
		Count	% of all apps[‡]	Count	% of apprvd apps[§]	Count	% of all apps[‡]	Count	% of apprvd apps[§]
796	Nonspecific abnormal findings	2,025	13.8	1,287	9.4	490	11.3	310	11.6
367.1	Myopia	1,510	10.3	1,067	7.8	452	10.4	346	13.0
389	Hearing deficiency	1,810	12.4	897	6.6	377	8.7	152	5.7
493	Asthma	1,681	11.5	1,078	7.9	257	5.9	169	6.3
300	Neurotic, mood, somatoform, dissociative, or factitious disorder	952	6.5	617	4.5	240	5.5	149	5.6
733.99	Open reduction internal fixation/retained hardware	1,912	13.1	1,606	11.8	126	2.9	87	3.3
995	Other anaphylactic shock	18	0.1	13	0.1	120	2.8	90	3.4
314	Hyperkinetic syndrome of childhood	848	5.8	631	4.6	105	2.4	60	2.2
401	Hypertension	928	6.3	781	5.7	99	2.3	72	2.7
305	Nondependent drug abuse	396	2.7	267	2.0	88	2.0	53	2.0
796.2	Elevated blood pressure reading without diagnosis of hypertension	110	0.8	92	0.7	81	1.9	76	2.8
791	Proteinuria	303	2.1	167	1.2	75	1.7	48	1.8
313	Disturbance of emotions specific to childhood and adolescence	330	2.3	197	1.4	72	1.7	39	1.5
737	Deviation or curvature of spine current	296	2.0	142	1.0	72	1.7	14	0.5
692	Eczema	346	2.4	205	1.5	68	1.6	44	1.6
785	Palpitations/tachycardia	344	2.4	295	2.2	64	1.5	53	2.0
905.4	Late effect of fracture of lower extremities	315	2.2	220	1.6	54	1.2	40	1.5
724	Unspecified disorders of back	248	1.7	151	1.1	48	1.1	33	1.2
394	Valvular Heart Diseases acquired	152	1.0	95	0.7	47	1.1	34	1.3
706	Diseases of sebaceous glands	118	0.8	78	0.6	46	1.1	29	1.1
N/A	Individuals with one or more conditions that are not specified above	5,704	28.0	3,750	27.5	1,432	32.4	774	28.9
	Total waivers considered	20,346				4,413			
	Total decisions rendered[††]	17,737				3,375			
	Total of approved waivers	13,636 (67.0%)				2,672 (60.5%)			

[†] Condition categories (DoDI 6130.3 groups) are not mutually exclusive.

[‡] Indicates the percentage of waiver applicants for the specified condition category.

[§] Indicates the percentage of approved waiver applicants for the specified condition category.

[††] Waiver applications for which a decision (granted vs. denied) is not known are not included in this total.

Table 3.30 shows the most common conditions for which waivers were considered by the Air Force waiver authority. In addition to 2009 data, data from the years 2004 to 2008 are shown in aggregate for comparison. Disorders of refraction and accommodation were by far the most common waiver sought by Active Duty Air Force enlistees in 2009 (11.5%) of all waiver applicants) and as well as in 2004-2008 (12.3%). Asthma (5.3%), hearing loss (4.8%), and episodic mood disorder (4.6%) are the second, third, and fourth most common waivers applied for in 2009. These findings appear to be consistent with the previous five year period with some change in the rank of most commonly sought waivers. However, the percent of waivers sought for the top five conditions decreased slightly from that observed in the previous five years.

TABLE 3.30 TOP CONDITIONS FOR ENLISTED ACCESSION WAIVERS CONSIDERED IN 2004 – 2008 VS. 2009: AIR FORCE

ICD-9	Condition[†]	2004-2008				2009			
		Applied		Approved		Applied		Approved	
		Count	% of all apps[‡]	Count	% of apprvd apps[§]	Count	% of all apps[‡]	Count	% of apprvd apps[§]
367	Disorders of refraction and accommodation	1,334	12.3	785	13	364	11.5	257	11.7
493	Asthma	745	6.9	231	3.8	167	5.3	106	4.8
389	Hearing loss, unspecified	576	5.3	19	0.3	152	4.8	32	1.5
296	Episodic mood disorder	495	4.6	286	4.7	146	4.6	111	5
314	Hyperkinetic syndrome of childhood	594	5.5	451	7.5	136	4.3	112	5
785.0	Tachycardia, unspecified	195	1.8	174	2.9	113	3.6	102	4.6
401	Essential hypertension	111	1	54	0.9	100	3.1	92	4.2
692	Contact dermatitis and other eczema	264	2.4	47	0.8	86	2.7	41	1.9
300	Anxiety, dissociative and somatoform disorders	167	1.5	77	1.3	67	2.1	92	4.2
783.4	Lack of expected physiological development	422	3.9	372	6.2	65	2	51	2.3
745	Bulbus cordis anomalies and anomalies of cardiac septal closure	114	1.1	66	1.1	58	1.8	40	1.8
754.2	Congenital musculoskeletal deformities (of spine)	225	2.1	36	0.6	54	1.7	27	1.2
396	Disease of mitral and aortic valves	71	0.7	37	0.6	50	1.6	42	1.9
893	Open wound of toe(s)	179	1.7	107	1.8	49	1.5	27	1.2
593	Other disorder of kidney and ureter	124	1.1	44	0.7	47	1.5	31	1.4
75.2	Congenital anomalies of genital organs	95	0.9	61	1	45	1.4	40	1.8
368	Visual disturbances	208	1.9	145	2.4	42	1.3	33	1.5
718.8	Other joint derangement, not elsewhere classified	129	1.2	97	1.6	42	1.3	35	1.6
309	Adjustment reaction	155	1.4	101	1.7	35	1.1	27	1.2
530	Diseases of the esophagus	112	1	68	1.1	35	1.1	28	1.2
N/A	Individuals with one or more conditions that are not specified above	4,533	41.8	2,782	46.1	1,324	41.7	880	39.9
	Total waivers considered	10,848				3,177			
	Total decisions rendered[††]	10,724				3,177			
	Total of approved waivers	6,040 (55.7%)				2,206 (69.4%)			

[†] Condition categories (ICD-9 groups) are not mutually exclusive.

[‡] Indicates the percentage of waiver applicants for the specified condition category.

[§] Indicates the percentage of approved waiver applicants for the specified condition category.

[††] Waiver applications for which a decision (granted vs. denied) is not known are not included in this total.

Tables 3.31 through 3.34 show the top waiver consideration conditions ranked by waiver approval percentage in aggregate for 2004-2009.

Among Active Duty Army applicants (Table 3.31), nearly all waivers for elevated blood pressure without a diagnosis of hypertension, other reconstructive and refractive surgery on the cornea, and corneal transplant were granted in both 2009 and the previous five-year period. The proportion of approved waiver applications for unspecified disorders of lipid metabolism was 89.4% in 2009 compared to 96.2% in 2004-2008. It is worth noting that the frequency of several categories of waiver conditions, namely other and unspecified disorders of the bone and cartilage, abnormal loss of weight and underweight, and other nonspecific abnormal findings, were considerably lower in 2009 than in previous years.

None of the most common and highly approved waivers considered by the Navy waiver authority from 2006 to 2009 had approval rates of 90% or above (Table 3.32). In 2009, the most commonly approved waivers were for refractive surgery (86.9%) and anaphylaxis (81.0%). The distribution of the most commonly waived conditions in 2009 was similar to that observed in the period from 2006-2008, though the percent of waivers approved for tachycardia in 2009 was less than the percent approved in 2006-2008 (87.0%).

Within the Marine Corps, only elevated blood pressure reading without hypertension had an approval rate that exceeded 90% in 2009 (Table 3.33). The next leading conditions for which waivers were granted in 2009 were dysplastic nevi syndrome (88.2%), elbow limitation of motion (86.7%), palpitations/tachycardia (82.8%), and congenital pes planus (82.4%).

There were only four conditions among Air Force enlistees will approval rates of 90% or higher in 2009 (Table 3.34). These waiver applications were for flat foot (100%), tachycardia (95.6%), unspecified disorders of bone and cartilage (95.7%), open reduction of fracture with internal fixation (92.0%), and elevated blood pressure without hypertension (92.0%).

TABLE 3.31 CONDITION-SPECIFIC CATEGORIES FOR THOSE ACCESSION MEDICAL WAIVERS WITH THE HIGHEST PROPORTION OF APPROVED APPLICATIONS AMONG ACTIVE DUTY ARMY ENLISTEES: 2004–2008 VS. 2009

ICD-9	Condition[†]	Total		2004-2008		2009	
		Count	% granted	Count	% granted	Count	% granted
796.2	Elevated blood pressure reading without a diagnosis of hypertension	3,819	98.2	3,003	98.9	816	95.5
P11.7	Other reconstructive and refractive surgery on cornea	892	95.6	770	95.7	122	95.1
P11.6	Corneal transplant	438	94.7	388	95.4	50	90.0
272.9	Unspecified disorder of lipoid metabolism	1,731	93.2	964	96.2	767	89.4
272.0	Pure hypercholesterolemia	967	93.1	586	96.8	381	87.4
785.0	Tachycardia, unspecified	411	91.5	381	92.1	30	83.3
V22	Normal pregnancy	302	91.4	198	89.4	104	95.2
272.5	Lipoprotein deficiencies	647	91.2	299	94.3	348	88.5
785	Symptoms involving cardiovascular system	731	90.0	555	90.5	176	88.6
272	Unspecified disorders of lipoid metabolism	951	89.4	520	89.8	431	88.9
272.1	Pure hyperglyceridemia	794	89.0	426	91.5	368	86.1
429.9	Heart disease unspecified	447	87.7	206	90.8	241	85.1
790	Nonspecific findings on examination of blood	831	87.5	431	89.6	400	85.3
996.4	Mechanical complication of orthopedic device, implant, or graft	407	87.2	363	87.3	44	86.4
733.9	Other and unspecified disorders of bone and cartilage	2,849	86.5	2,734	86.9	115	74.8
V53.7	Orthopedic devices	357	84.6	125	86.4	232	83.6
783.2	Abnormal loss of weight and underweight	1,482	81.9	1,476	82.0	6	50.0
995[§]	Certain adverse effect not elsewhere classified	1,585	81.1	1,059	81.0	526	81.4
795[‡]	Other nonspecific abnormal cytological, histological, immunological, and DNA test findings	402	80.3	367	81.7	35	65.7
692	Contact dermatitis and other eczema	1,221	79.0	880	80.9	341	74.2

[†] Condition categories (ICD-9 groups) are not mutually exclusive.

[‡] Codes in this category typically include nonspecific reaction to the tuberculin skin test (without active TB) and abnormal results from a Papanicolaou smear.

[§] Codes in this category typically include unspecified allergies and anaphylactic shock.

TABLE 3.32 CONDITION-SPECIFIC CATEGORIES FOR THOSE ACCESSION MEDICAL WAIVERS WITH THE HIGHEST PROPORTION OF APPROVED APPLICATIONS AMONG ACTIVE DUTY NAVY ENLISTEES IN 2006-2008 VS. 2009

DoDI	Condition[†]	Total		2004-2008		2009	
		Count	% granted	Count	% granted	Count	% granted
P11.7	Refractive surgery	458	89.1	351	89.7	107	86.9
733.99	Open Reduction Internal Fixation/retained hardware	961	85.0	944	85.3	17	70.6
995	Other anaphylactic shock	673	83.7	415	85.3	258	81.0
785	Palpitations/tachycardia	473	81.0	284	87.0	189	72.0
718.1	Shoulder instability	247	80.2	171	81.3	76	77.6
717.83	Old disruption of the anterior cruciate ligament (ACL)	153	77.1	126	77.0	27	77.8
314	Attention Deficit Disorder/ADHD	416	71.9	296	75.3	120	63.3
746	Congenital anomalies of heart and great vessels	303	71.9	270	75.6	33	42.4
795	Abnormal histological and immunological findings, including abnormal Papanicolau smear	181	69.1	144	73.6	37	51.4
311	Depression Disorder NOS	359	68.0	274	72.3	85	54.1
924	Contusion of bone or joint	176	67.6	135	65.2	41	75.6
754.6	Pes planus	208	66.8	167	70.7	41	51.2
796.2	Elevated blood pressure	869	66.3	599	67.1	270	64.4
493	Asthma	1,247	65.5	975	68.2	272	55.9
367.1	Myopia	1,898	64.8	1,354	67.7	544	57.4
E958.9	Suicidal and self injurious behavior	140	62.1	139	62.6	1	0.0
692	Eczema	425	57.9	291	60.1	134	53.0
737	Deviation or curvature of the spine	342	45.9	263	46.8	79	43.0
791	Proteinuria	248	45.6	161	48.4	87	40.2
389	Hearing deficiency	1,491	41.1	1,080	45.2	411	30.4

† Condition categories (DoDI 6130.3 groups) are not mutually exclusive.

‡ Less than half of 2006 records provided a diagnosis code. However, since approval rates are calculated using only records with non-missing codes, the approval rates should not be affected (assuming that missing diagnosis codes are a random phenomenon).

TABLE 3.33 CONDITION-SPECIFIC CATEGORIES FOR THOSE ACCESSION MEDICAL WAIVERS WITH THE HIGHEST PROPORTION OF APPROVED APPLICATIONS AMONG ACTIVE DUTY MARINE CORPS ENLISTEES: 2004–2008 VS. 2009

DoDI	Condition[†]	Total		2004-2008		2009	
		Count	% Granted	Count	% Granted	Count	% Granted
448.1	Dyplastic Nevi Syndrome	103	94.2	86	95.3	17	88.2
796.2	Elevated blood pressure reading without diagnosis of hypertension	191	88.0	110	83.6	81	93.8
P11.7	Refractive surgery	459	86.9	459	86.9	0	0.0
785	Palpitations/tachycardia	408	85.3	344	85.8	64	82.8
905.2	Upper extremity deformities, injury, and disease	145	84.1	133	86.5	12	58.3
733.9	Retained hardware	2,038	83.1	1,912	84.0	126	69.0
401	Hypertension	1,027	83.1	928	84.2	99	72.7
995	Other anaphylactic shock	760	79.6	640	80.5	120	75.0
754.6	Pes planus, congential	136	77.2	119	76.5	17	82.4
717.3	Knee internal derangement	361	74.8	331	75.8	30	63.3
367.2	Astigmatism	357	73.9	324	74.4	33	69.7
P81	Surgical correction of any knee ligaments	336	73.8	336	73.8	0	0.0
376.1	Chronic inflammatory disorders of orbit	229	73.4	229	73.4	0	0.0
726.3	Elbow limitation of motion	104	73.1	89	70.8	15	86.7
314	ADD/ADHD	953	72.5	848	74.4	105	57.1
367.1	Myopia	1,433	71.9	1,414	71.9	19	68.4
905.4	Lower extremity deformities, injury, and disease	369	70.5	315	69.8	54	74.1
603.9	Hydrocele, current	101	70.3	82	70.7	19	68.4
367	Disorders of refraction and accommodation	558	69.9	106	53.8	452	73.7
735	Acquired deformities of toes	102	69.6	87	72.4	15	53.3

[†] Condition categories (DoDI 6130.3 groups) are not mutually exclusive.

TABLE 3.34 CONDITION-SPECIFIC CATEGORIES FOR THOSE ACCESSION MEDICAL WAIVERS WITH THE HIGHEST PROPORTION OF APPROVED APPLICATIONS AMONG ACTIVE DUTY AIR FORCE ENLISTEES: 2004–2008 VS. 2009

ICD-9	Condition†	Total		2004-2008		2009	
		Count	% Granted	Count	% Granted	Count	% Granted
785.0	Tachycardia, unspecified	308	91.6	195	89.2	113	95.6
796.2	Elevated blood pressure reading without a diagnosis of hypertension	81	90.1	56	89.3	25	92.0
P79.3	Open reduction of fracture with internal fixation	672	88.7	589	87.8	83	95.2
783.4	Lack of expected physiological development	487	86.9	422	88.2	65	78.5
603	Hydrocele	75	85.3	54	88.9	21	76.2
733.9	Other unspecified disorders of bone and cartilage	51	84.3	28	75.0	23	95.7
785.2	Undiagnosed cardiac murmurs	104	79.8	93	79.6	11	81.8
P81	Repair and plastic operation on joint structures	210	79.0	191	78.5	19	84.2
734	Flat foot	152	78.9	131	75.6	21	100.0
718.8	Joint derangement	171	77.2	129	75.2	42	83.3
314	Hyperkinetic syndrome of childhood	730	77.1	594	75.9	136	82.4
366	Cataract	58	75.9	46	76.1	12	75.0
718.3	Recurrent dislocation of joint	203	75.9	181	74.6	22	86.4
736	Other acquired deformities of limbs	57	75.4	46	78.3	11	63.6
427	Cardiac dysrhythmias	55	74.5	36	66.7	19	89.5
752	Congenital anomalies of genital organs	140	72.1	95	64.2	45	88.9
733.4	Aseptic necrosis of bone	68	72.1	48	64.6	20	90.0
706	Diseases of sebaceous glands	82	72.0	51	66.7	31	80.6
368	Visual disturbances	250	71.2	208	69.7	42	78.6

† Condition categories (ICD-9 groups) are not mutually exclusive.

Part II: Medical waivers with an accession record

Table 3.35 shows the numbers of enlisted Active Duty applicants who were granted accession medical waivers who had a MEPS physical examination record indicating no prior service. Results are shown for each year from 2004 to 2009 for all service branches combined. Also shown are the numbers and percentages of these individuals who were subsequently gained onto Active Duty service within one and two years of application for first time enlisted Active Duty at MEPS. The number of approved waivers recorded in 2009 (16,823) was the higher than all previous years. The proportion of individuals granted waivers who subsequently become accessions within one year of their MEPS physical has fluctuated over the period from 2004-2009 but generally remained at 60% with the exception of a notable increase in 2006.

TABLE 3.35 ACTIVE DUTY ACCESSIONS WITHIN ONE AND TWO YEARS OF PHYSICAL EXAMINATION FOR ENLISTED APPLICANTS WHO RECEIVED A WAIVER IN 2004–2009[†]: BY YEAR

Year of waiver consideration	Applicants with waivers granted	Applicants who accessed within 1 year of application		Applicants who accessed within 2 years of application	
		Count	%	Count	%
2004	11,290	5,397	47.8	6,418	57.0
2005	10,738	5,459	50.8	6,284	58.6
2006	12,526	7,559	60.3	8,411	67.2
2007	13,250	8,555	64.6	9,550	72.1
2008	16,333	10,014	61.3	11,090	67.9
2009[‡]	16,823	6,151	36.6	6,627	39.4

[†] Considers accessions among only those applicants with both a MEPS physical examination for Active Duty service record and an approved waiver.

[‡] The accession rate was underestimated due to a lack of sufficient follow up time.

Tables 3.36 through 3.40 describe the characteristics of applicants who were granted waivers from all branches of service. Individuals with a corresponding MEPS Active Duty application record as well as subsequent accessions are shown for 2004-2008 and separately for 2009.

Total numbers of records vary slightly depending upon the completeness of data on the demographic factor being considered. For example, an individual with missing data on gender, but not race, will be included in the description of race of applicants but not in the description of gender.

The gender distribution of enlisted applicants who received a waiver is shown in Table 3.36 for all waivers and for those with subsequent accession records. In 2009 the distribution of gender among all waivers and accessions was similar to that observed in 2004-2008. In both time periods, males accounted for a larger percentage of accessions (82.9% in 2009) than they did among approved waiver applicants (81.3% in 2009).

TABLE 3.36 GENDER DISTRIBUTION OF ALL ACTIVE DUTY ENLISTED APPLICANTS WHO RECEIVED AN ACCESSION MEDICAL WAIVER COMPARED TO ONLY THOSE WAIVED PERSONNEL WHO BEGAN ACTIVE DUTY SERVICE: 2004-2008 VS. 2009

Gender	2004- 2008				2009			
	All waivers		Accessed only		All waivers		Accessed only	
	Count	%	Count	%	Count	%	Count	%
Male	52,700	82.2	36,481	84.2	13,679	81.3	5,691	82.9
Female	11,433	17.8	6,834	15.8	3,144	18.7	1,172	17.1
Total†	64,133	-	43,315	-	16,823	-	6,863	-

† Some individuals with a missing value for gender are included in the total

Table 3.37 shows the age distribution of enlisted applicants who received a waiver in 2004-2008 and in 2009. The majority of waiver recipients in 2009 were between the ages of 17 and 20 years, regardless of whether or not they accessed. The percentage of individuals within each age category of waiver applicants and those who accessed was consistent when comparing 2009 and the previous five year period.

TABLE 3.37 AGE DISTRIBUTION OF ALL ACTIVE DUTY ENLISTED APPLICANTS WHO RECEIVED AN ACCESSION MEDICAL WAIVER COMPARED TO ONLY THOSE WAIVED PERSONNEL WHO BEGAN ACTIVE DUTY SERVICE: 2004-2008 VS. 2009

Age	2004-2008				2009			
	All waivers		Accessed only		All waivers		Accessed only	
	Count	%	Count	%	Count	%	Count	%
17 – 20	42,315	66.0	29,426	68.0	9,848	58.6	4,052	59.1
21 – 25	14,907	23.3	10,103	23.3	4,451	26.5	1,912	27.9
26 – 30	4,017	6.3	2,402	5.6	1,317	7.8	516	7.5
> 30	2,877	4.5	1,367	3.2	1,205	7.2	381	5.6
Total	64,116	-	43,298	-	16,821	-	6,861	-

Table 3.38 shows the race of enlisted applicants who received a medical waiver in 2009 and in 2004-2008. The demographic profile of applicants and accessions, with respect to race, was similar between 2009 and in previous years.

TABLE 3.38 DISTRIBUTION OF RACE AMONG ALL ACTIVE DUTY ENLISTED APPLICANTS WHO RECEIVED AN ACCESSION MEDICAL WAIVER COMPARED TO ONLY THOSE WAIVED PERSONNEL WHO BEGAN ACTIVE DUTY SERVICE: 2004-2008 VS. 2009

Race[†]	2004-2008				2009			
	All waivers		Accessed only		All waivers		Accessed only	
	Count	%	Count	%	Count	%	Count	%
White	49,974	77.9	34,418	79.5	12,744	75.8	5,374	78.3
Black	7,556	11.8	5,110	11.8	2,127	12.6	819	11.9
Other	5,117	8.0	3,600	8.3	1,592	9.5	668	9.7
Missing or declined	1,490	2.3	187	0.4	360	2.1	2	0.0
Total	64,137	-	43,315	-	16,823	-	6,863	-

[†] Note: New categories for race were available beginning in 2003. However, greater numbers of applicants chose not to indicate their race.

Table 3.39 shows the education level of applicants granted an accession medical waiver at the time of application in 2009 and in 2004-2008. Applicants who subsequently accessed are shown separately from applicants granted a waiver. The distribution of education level among applicants granted a waiver in 2009 is similar to the number of applicants in 2004-2008. The prevalence of education beyond high school was higher in 2009 in both applicants granted waivers as well as those who accessed following wavier. Note that the great majority of applicants granted a waiver who have not completed high school are high school seniors and will graduate prior to enlistment.

TABLE 3.39 DISTRIBUTION OF EDUCATION (HIGHEST LEVEL ATTAINED AT ACCESSION) AMONG ALL ACTIVE DUTY ENLISTED APPLICANTS WHO RECEIVED AN ACCESSION MEDICAL WAIVER COMPARED TO ONLY THOSE WAIVED PERSONNEL WHO BEGAN ACTIVE DUTY SERVICE: 2004-2008 VS. 2009

Education level	2004-2008				2009			
	All waivers		Accessed only		All waivers		Accessed only	
	Count	%	Count	%	Count	%	Count	%
Below HS senior[†]	1,798	2.8	589	1.4	529	3.1	144	2.1
HS senior	16,308	25.4	11,461	26.5	3,303	19.6	1,219	17.8
HS diploma	40,799	63.6	28,165	65.0	11,214	66.7	4,837	70.5
Some college	2,367	3.7	1,482	3.4	796	4.7	314	4.6
Bachelor's and higher	2,865	4.5	1,618	3.7	981	5.8	349	5.1
Total	64,137	-	43,315	-	16,823	-	6,863	-

[†] Encompasses the following three cases: 1) one who is pursuing completion of the GED or other test-based high school equivalency diploma, vocational school, or secondary school, etc.; 2) one who is not attending high school and who is neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school but is not yet a senior

Table 3.40 shows the distribution of AFQT percentile scores among enlisted applicants who received a waiver in 2004-2008 and in 2009. The distribution of AFQT scores does not appear to be different in 2009 compared to the previous five years. In the previous Annual Report, it was observed that there were higher percentages of waiver applicants who scored in the lowest percentile groups relative to 2004-2008. A similar distribution was seen among waiver applicants that subsequently accessed.

TABLE 3.40 DISTRIBUTION OF AFQT SCORE GROUPS AMONG ALL ACTIVE DUTY ENLISTED APPLICANTS WHO RECEIVED AN ACCESSION MEDICAL WAIVER COMPARED TO ONLY THOSE WAIVED PERSONNEL WHO BEGAN ACTIVE DUTY SERVICE: 2004-2008 VS. 2009

AFQT score	2004-2008				2009			
	All waivers		Accessed only		All waivers		Accessed only	
	Count	%	Count	%	Count	%	Count	%
93-99	5,127	8.0	3,367	7.8	1,479	8.8	552	8.0
65-92	23,982	37.4	16,399	37.9	6,574	39.1	2,680	39.1
50-64	16,167	25.2	11,035	25.5	4,244	25.2	1,753	25.5
30-49	17,449	27.2	11,877	27.4	4,338	25.8	1,822	26.6
11-29	1,002	1.6	538	1.2	148	0.9	40	0.6
<11	63	0.1	0	0.0	7	0.0	1	0.0
missing	347	0.5	99	0.2	33	0.2	15	0.2
total	64,137	-	43,315	-	16,823	-	6,863	-

Hospitalizations

This section summarizes inpatient hospitalization records of service members admitted to any military facility. Part I summarizes all hospitalization records, regardless of whether AMSARA has an accession record corresponding to the hospitalized individual. These results address the burden of disease across all military services. Part II summarizes only inpatient records among Active Duty enlistees who began service during 2004-2009 and for whom AMSARA has a corresponding Active Duty accession record. This section accordingly examines hospitalization among Active Duty enlistees early in service.

Part I: Hospitalizations irrespective of an accession record

Hospitalization records of service members admitted to any military treatment facility are summarized regardless of whether AMSARA has an accession record corresponding to the hospitalized individual. Except where indicated, the tables include all hospitalizations, regardless of length of service before hospitalization. For those tables that present results according to length of service before hospitalization, the length of service was taken from a field within each hospitalization record.

Table 3.41 shows the overall hospitalization counts and percentages during the first and second years of service as well as counts of hospitalization at all lengths of service. Results are shown for Active Duty enlistees separately for 2009 and the previous five-year period. For the Army, and Air Force the percent of all hospitalizations occurring in the first and second years of service does not appear to be substantially different from one another in 2009 or previous years. The percent of hospitalizations occurring in the first year of service for Active Duty Navy enlistees is lower than the corresponding percent for the previous five years. In 2009, the percent of Marines hospitalized during the first year of service (21%) was higher than both the percent of hospitalizations during the first year of service that occurred in the previous five years (19.6%) and higher than percent of hospitalization during the second year of service.

TABLE 3.41 HOSPITALIZATIONS IN 2004 – 2009 BY SERVICE AND YEARS OF SERVICE: ACTIVE DUTY

Service	Years of service	2004-2008		2009	
		Count	% of service total	Count	% of service total
Army	0 – 1	19,930	14.3	3,525	13.4
	1 – 2	19,010	13.7	3,600	13.7
	All	139,147	-	26,366	-
Navy	0 – 1	3,391	6.2	495	5.0
	1 – 2	6,271	11.4	1,256	12.6
	All	55,127	-	9,963	-
Marines	0 – 1	6,951	19.6	1,511	21.0
	1 – 2	5,182	14.6	1,215	16.9
	All	35,526	-	7,207	-
Air Force	0 – 1	4,929	13.0	856	13.2
	1 – 2	3,215	8.5	556	8.6
	All	37,930		6,466	

Table 3.42 shows hospitalizations among the Reserves. When comparing the percentages of hospitalizations occurring in the first and second years of service, the following generalizations can be made. For the Army, the percentage of hospitalizations occurring in the first year of service for 2009 (24.4%) was substantially higher for hospitalizations occurring in the first year of service for the previous five year period (16.4%) and was more than triple the percentage of hospitalizations that occurred in the second year of service (7.5%). In 2009 the Marines experienced a reduction in the percent of hospitalizations occurring in the first year of service but an increase in the percent of hospitalization occurring in the in the second. The Air Force also experienced a small reduction in the percentage of hospitalizations during the second year of service in 2009.

TABLE 3.42 HOSPITALIZATIONS IN 2004 – 2009 BY SERVICE AND YEARS OF SERVICE: RESERVES

Service	Years of service	2004-2008		2009	
		Count	% of service total	Count	% of service total
Army	0 – 1	1,263	16.4	350	24.4
	1 – 2	469	6.1	107	7.5
	All	7,688		1,435	-
Navy	0 – 1	24	2.5	7	3.2
	1 – 2	34	3.5	7	3.2
	All	969	-	221	-
Marines	0 – 1	59	6.7	5	5.0
	1 – 2	58	6.6	8	8.0
	All	885	-	100	-
Air Force	0 – 1	80	10.3	14	9.9
	1 – 2	36	4.6	5	3.5
	All	777	-	141	-

Table 3.43 shows hospitalizations for the National Guard. Most hospitalizations in 2004-2009 occurred among service members with more than two years of service. Hospitalizations among first-year service members represented (16.3%) for (2004-2008) and (20.7%) for (2009) of all hospitalizations among the Army National Guard. In 2007, the percentage of all hospitalizations in the Air National Guard that occurred in the first year of service was lower than in the previous five-year period.

TABLE 3.43 HOSPITALIZATIONS IN 2004 – 2009 BY SERVICE AND YEARS OF SERVICE: NATIONAL GUARD

Service	Years of service	2004 - 2008		2009	
		Count	% of service total	Count	% of service total
Army	0 – 1	2,064	16.3	553	20.7
	1 – 2	874	6.9	236	8.8
	All	12,642	-	2,667	-
Air Force	0 – 1	65	8.5	4	2.7
	1 – 2	21	2.7	5	3.4
	All	769	-	149	-

Hospitalizations for Active Duty enlisted service members by condition and service are shown in Table 3.44 for the years 2004 to 2008 in aggregate and separately for 2009. For each service, complications of due to pregnancy were the most common conditions for which hospitalizations occurred in 2004-2008 and in 2009. Though the percentage of hospitalizations attributable to this condition varied from (12.8%) (Marines, 2004-2008) to (34.0%) (Navy, 2004-2008) across services and years examined. Among enlisted Army members, complications of pregnancy (16.7%), neurotic and personality disorders (10.1%), fractures (5.8%), nonspecific symptoms (5.5%), and injuries (5.3%), were the most common inpatient hospitalizations occurring in 2009. The percentage of injury decreased from (9.9%) in 2004-2008 to (5.3%) in 2009 and the percentage of fractures decreased from (8.0%) in 2004-2008 to 5.8%. Neurotic and personality disorders increased from (9.2%) in 2004-2008 to (10.1%) in 2009. Among enlisted Navy members in 2009, complications of pregnancy (33.6%) were followed by neurotic and personality disorders (6.5%), and nonspecific symptoms (4.4%). Complications of pregnancy (13.9%), neurotic and personality disorders (11.2%), and fractures (6.2%) were the most common hospitalizations among Marines in 2009. Complications of pregnancy (31.0%), neurotic and personality disorders (7.4%), and nonspecific symptoms (5.2%) were the most common hospitalizations among enlisted Air Force members in 2009.

TABLE 3.44 DISTRIBUTION OF PRIMARY CAUSE CATEGORIES FOR HOSPITALIZATIONS AMONG ACTIVE DUTY ENLISTEES IN 2004–2008 VS. 2009: BY SERVICE

ICD-9	Category	Army		Navy		Marines		Air Force	
		2004 - 2008	2009	2004 - 2008	2009	2004 - 2008	2009	2004 - 2008	2009
630-677	Complications of pregnancy, childbirth, and the puerperium	14.7	16.7	34.0	33.6	12.8	13.9	31.6	31.0
830-959	Injuries	9.9	5.3	3.3	2.7	10.7	5.7	3.1	2.2
800-829	Fracture	8.0	5.8	4.0	3.6	9.6	6.2	3.0	2.7
308-316	Neurotic or personality disorders	7.6	8.6	4.4	5.3	6.7	9.5	6.3	6.3
781-782,786-794,797-799	Nonspecific symptoms	3.4	3.3	3.4	2.9	1.9	1.6	4.1	3.5
295-299	Other Psychoses	3.4	5.0	3.5	3.9	3.9	5.1	2.7	2.4
680-686	Infections of skin and subcutaneous tissue	3.3	3.1	2.7	2.5	5.6	4.8	2.2	2.4
720-723	Dorsopathies	2.2	2.6	2.1	2.2	1.4	1.3	1.9	2.5
480-487	Pneumonia and influenza	2.1	2.7	0.7	0.7	3.9	4.3	1.1	1.2
540-543	Appendicitis	2.0	2.4	3.1	3.8	3.3	3.5	3.2	3.9
710-717	Arthropathies and related disorders	2.0	1.4	1.7	1.8	2.4	2.0	1.3	1.2
520-529	Diseases of the oral cavity, salivary glands, and jaws	1.7	1.6	0.9	1.3	1.0	1.4	2.7	2.4
300-302	Neurotic or personality disorders	1.6	1.4	1.8	1.1	2.1	1.7	1.0	1.0
780.0	General symptoms	1.5	1.8	1.3	1.2	1.1	1.4	1.5	1.4
570-579	Other diseases of digestive system	1.4	1.8	2.0	2.4	1.1	1.4	1.8	2.1
550-553	Hernia of abdominal cavity	1.4	1.2	0.5	0.5	1.1	1.2	0.6	0.7
590-599	Other diseases of urinary system	1.4	1.3	1.1	1.3	1.1	0.9	1.6	1.3
725,727-729	Rheumatism, excluding the back	1.4	1.1	0.9	0.7	1.2	1.9	0.8	0.8
960-989	Poisoning and toxic effects	1.4	1.9	1.0	0.9	1.5	1.5	0.6	0.7
718.0	Other derangement of joint	1.3	0.8	0.7	0.5	1.4	1.1	0.6	0.4
	Others	28.3	30.3	27.0	27.1	26.3	29.7	28.1	30.0
	Total hospitalizations	139,147	26,366	55,127	9,963	35,526	7,207	37,930	6,466

Table 3.45 shows the percentage hospitalized by primary cause and component of service in aggregate for 2004-2008 and separately for 2009. The Navy and Marine Corps do not have a National Guard component. In 2009, complications of pregnancy (21.5%) were the most common reason for hospitalizations among Active Duty members followed by neurotic and personality disorders (9.2%), fractures (5.0%), non-specific symptoms (4.9%), and other psychoses (4.5%). Among Reservists, the most common causes of inpatient hospitalizations in 2009 were nonspecific symptoms (7.3%), neurotic and personality disorders (6.1%), complications of pregnancy (5.0%), diseases of oral cavity, salivary glands, and jaws (5.0%), fractures (4.1%), and injuries (4.1%). For the National Guard the most common hospitalizations were nonspecific symptoms (8.1%), neurotic and personality disorders (7.3%), injuries (6.7%), and fractures (6.4%). In general, the contribution of each category to the sum of all hospitalizations within a service was remarkably similar between 2009 and 2004-2008, except for the noticeable reduction in the proportion of injuries in 2009 compared the previous five year period for all components.

TABLE 3.45 DISTRIBUTION OF PRIMARY CAUSE CATEGORIES FOR HOSPITALIZATIONS AMONG ENLISTEES IN 2004 – 2008 VS. 2009: BY COMPONENT

ICD-9	Category	Active Duty		Reserves		National Guard	
		2004-2008	2009	2004-2008	2009	2004-2008	2009
630-677	Complications of pregnancy, childbirth, and the puerperium	20.8	21.5	5.2	4.96	2.5	2.9
830-959	Injuries	7.7	4.4	8.8	4.06	10.8	6.7
800-829	Fracture	6.7	5.0	7.0	4.11	8.3	6.4
308-316	Neurotic or personality disorders	6.6	7.8	5.9	5.22	6.4	5.9
295-299	Other Psychoses	3.4	4.5	3.3	4.53	3.3	4.9
781-782,786-794,797-799	Nonspecific Symptom	3.3	3.0	6.9	5.11	6.6	5.2
680-686	Infections of skin and subcutaneous tissue	3.3	3.1	3.5	4.16	4.0	4.5
540-543	Appendicitis	2.6	3.1	2.1	2.32	2.0	1.9
720-723	Dorsopathies	2.0	2.3	2.7	2.74	2.7	2.7
480-487	Pneumonia and influenza	2.0	2.3	1.8	4.22	2.8	5.7
710-717	Arthropathies and related disorders	1.9	1.5	2.3	2.37	1.7	1.7
300-302	Neurotic or personality disorders	1.6	1.4	1.3	0.9	1.3	1.4
520-529	Diseases of the oral cavity, salivary glands, and jaws	1.6	1.6	1.5	5.01	1.3	3.2
570-579	Other diseases of digestive system	1.6	1.9	2.1	2.95	1.9	2.6
780	General symptoms	1.4	1.6	1.9	1.69	2.0	2.2
590-599	Other diseases of urinary system	1.3	1.2	2.4	1.74	2.7	2.3
960-989	Poisoning and toxic effects	1.2	1.5	0.7	0.84	0.8	0.9
725,727-729	Rheumatism, excluding the back	1.2	1.1	1.4	1.48	1.1	1.6
210-229	Benign neoplasms	1.1	1.1	2.1	1.9	1.3	1.2
303-304	Alcohol and drug dependence	1.1	1.4	0.9	1	0.9	1.0
	Other	27.6	28.8	36.4	38.7	35.6	35.3
	Total hospitalizations	267,730	50,002	10,319	1,897	13,411	2,816

Part II: Hospitalizations with an accession record, Active Duty enlistees only

Hospitalization records of Active Duty enlistees who began service during 2004-2009 and for whom AMSARA has a corresponding accession record are summarized. Relative risks are used to compare the risk of hospitalization across demographic groups. The baseline group chosen for each comparison depends on the factor being considered. For factors with some inherent order (e.g., age group, which ranges from younger to older) it is the first or last group in that order, as appropriate. Otherwise, the baseline group is generally the largest group.

Table 3.46 shows hospitalizations and persons hospitalized among soldiers accessed during each year from 2004 to 2009. Hospitalizations are separated into two groups: one that includes hospitalizations occurring in the same year as accession and one that includes hospitalizations occurring within one year of Active Duty service. The former provides a basis for appropriate comparison for those accessed in 2009, because hospitalization data were available only through 2009 in this report, allowing less than a full year of follow-up for this group. Because multiple hospitalizations can occur per person, results are shown both in terms of hospitalizations ("Admissions") and people hospitalized ("People"). The proportion of people hospitalized (% of People) within the first year of service is relatively stable from 2004-2009.

TABLE 3.46 ACTIVE DUTY HOSPITALIZATIONS IN 2004 - 2009: BY YEAR

Year	Total accessed	Within same gain year			Within one year of service		
		Admissions	People	% of people	Admissions	People	% of people
2004	149,705	3,406	3,094	2.1	5,838	5,162	3.4
2005	124,317	2,648	2,390	1.9	5,307	4,584	3.7
2006	161,786	3,899	3,470	2.1	7,566	6,509	4.0
2007	161,605	3,734	3,372	2.1	7,202	6,211	3.8
2008	165,667	3,521	3,191	1.9	6,550	5,731	3.5
2009	160,004	3,337	3,009	1.9	3,336	3,008	1.9
Total	923,084	20,545	18,526	-	35,799	31,205	-

Table 3.47 shows that the risk of hospital admission within one year of accession for enlisted personnel varies by service. Army enlistees had the highest risk of hospitalization in the year following accession. This risk was significantly greater than Navy, Marine, and Air Force enlistees. Marine Corps enlistees had the second highest risk of hospitalization, which was also greater than Navy and Air Force enlistees. Navy enlistees had the lowest risk of hospitalization admission.

TABLE 3.47 HOSPITAL ADMISSIONS WITHIN ONE YEAR OF ACCESSION FOR ACTIVE DUTY ENLISTED PERSONNEL ACCESSED IN 2004 – 2009: BY SERVICE

Service	Total accessed	Admissions	Individuals hospitalized			
			Count	%	Relative risk	95% CI
Army	349,786	19,713	16,925	4.8	1.00	-
Navy	209,686	3,494	3,085	1.5	0.30	(0.29,0.32)
Marines	193,708	8,241	7,290	3.8	0.78	(0.76,0.80)
Air Force	169,904	4,357	3,910	2.3	0.48	(0.46,0.49)

Tables 3.48 through 3.52 summarize the demographic characteristics of enlistees hospitalized within one year of accession. The risk of hospitalization was significantly higher for women relative to men (Table 3.48). Table 3.49 shows that the risk of hospitalization increases significantly with advancing age relative to the youngest age group and that the risk of each age group is significantly higher than the next lower age group. The highest relative risk was observed for the oldest age group (over 30). Whites had a significantly higher risk of hospitalization within a year of accession relative to blacks and individuals of any other race (Table 3.50). Those who declined to report race had the highest hospitalization risk. Table 3.51 shows the hospitalization risk by the level of education at accession in 2004-2009. The risk of hospitalization in the first year of accession was lower for individuals in the "Below HS graduate" category compared to those who graduated high school. Enlistees who had completed some college at the time of accession had a higher risk of hospital admission; the risk of hospitalization in the first year of service for enlistees with a Bachelor's degree or higher was lower than the risk among high school graduates.

TABLE 3.48 HOSPITAL ADMISSIONS WITHIN ONE YEAR OF ACCESSION FOR ACTIVE DUTY ENLISTED PERSONNEL ACCESSED IN 2004–2009: BY GENDER

Gender	Total accessions	Admissions	Individuals hospitalized			
			Count	%	Relative risk	95% CI
Male	773,998	28,170	24,628	3.2	1.00	-
Female	149,084	7,629	6,577	4.4	1.39	(1.35, 1.42)

TABLE 3.49 HOSPITAL ADMISSIONS WITHIN ONE YEAR OF ACCESSION FOR ACTIVE DUTY ENLISTED PERSONNEL ACCESSED IN 2004-2009: BY AGE

Age group	Total accessions	Admissions	Individuals hospitalized			
			Count	%	Relative risk	95% CI
17 – 20	625,446	23,221	20,339	3.3	1.00	-
21 – 25	234,802	9,291	8,088	3.4	1.05	(1.03,1.08)
26 – 30	45,281	2,157	1,841	4.0	1.24	(1.18,1.30)
> 30	17,555	1,130	937	5.3	1.62	(1.52,1.73)

TABLE 3.50 HOSPITAL ADMISSIONS WITHIN ONE YEAR OF ACCESSION FOR ACTIVE DUTY ENLISTED PERSONNEL ACCESSED IN 2004–2009: BY RACE

Race[†]	Total accessions	Admissions	Individuals hospitalized			
			Count	%	Relative risk	95% CI
White	707,262	28,620	24,914	3.5	1.00	-
Black	132,186	4,638	4,100	3.1	0.88	(0.85,0.91)
Other	78,638	2,301	1,992	2.5	0.72	(0.69,0.75)
Declined	4,998	240	199	3.9	1.12	(0.97,1.29)

[†] Note: New categories for race were available beginning in 2003. However, greater numbers of applicants chose not to indicate their race.

TABLE 3.51 HOSPITAL ADMISSIONS WITHIN ONE YEAR OF ACCESSION FOR ACTIVE DUTY ENLISTED PERSONNEL ACCESSED IN 2004–2009: BY EDUCATION LEVEL

Education level	Total accessions	Admissions	Individuals hospitalized			
			Count	%	Relative risk	95% CI
Below HS graduate[†]	6,550	187	169	2.6	0.78	(0.67,0.91)
HS diploma	801,956	30,270	26,415	3.3	1.00	-
Some college	27,518	1,365	1,159	4.2	1.28	(1.20,1.36)
Bachelor's or higher	21,554	763	670	2.9	0.90	(0.83,0.97)
Missing	65,506	3,214	2,792	4.2	1.28	(1.23,1.34)

[†] Encompasses the following three cases: 1) one who is pursuing completion of the GED or other test-based high school equivalency diploma, vocational school, or secondary school, etc.; 2) one who is not attending high school and who is neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school but is not yet a senior.

Tables 3.52 shows hospital admissions within one year of accession for Active Duty enlisted personnel by AFQT score. As shown in the table, the risk of hospitalization is lowest among individuals scoring in the highest percentile group (93-99). Relative to the highest percentile group, the risk of hospitalization of each of the other percentile score groups is significantly higher, with the greatest relative risk for hospitalization seen in the lowest percentile group (11-29). The percentage of enlistees hospitalized tended to increase with decreasing AFQT percentile score group.

TABLE 3.52 HOSPITAL ADMISSIONS WITHIN ONE YEAR OF ACCESSION FOR ACTIVE DUTY ENLISTED PERSONNEL ACCESSED IN 2004 – 2009: BY AFQT SCORE

AFQT score	Total accessions	Admissions	Individuals hospitalized			
			Count	%	Relative risk	95% CI
93 – 99	56,263	1,837	1,617	2.9	1.00	-
65 – 92	339,914	12,568	10,975	3.2	1.13	(1.07,1.19)
50 – 64	241,514	9,709	8,474	3.5	1.23	(1.17,1.30)
30 – 49	264,405	10,814	9,395	3.6	1.25	(1.18,1.31)
11 – 29[†]	13,418	707	603	4.5	1.58	(1.43,1.73)
Missing	7,570	164	141	1.7	-	-

[†] Individuals scoring in the 10th percentile or lower are prohibited from applying, although some exceptions have been noted.

Tables 3.53 shows the most common categories of medical conditions resulting in hospitalization and the numbers of admissions and individuals admitted for these conditions. The category of neurotic and personality disorders is clearly the most frequent medical condition leading to hospitalization, particularly for hospitalization during the first year of service. Pneumonia and influenza are the second leading cause for hospitalizations in the first year of service followed by infections of the skin and subcutaneous tissue, fractures, other psychoses, nonspecific symptoms, and injuries. When considering all hospitalizations within the first two years of service, hospitalizations for neurotic and personality disorders are by far the most common. Complications of pregnancy are the second leading cause of hospitalizations within the first two years of service.

When comparing the numbers of hospitalizations within each medical category between the different follow-up periods (i.e. one and two years following accession), it is clear that several conditions resulting in hospital admissions tend to occur most frequently in the first year of Active Duty enlisted service. In particular, hospitalizations for pneumonia and influenza, acute respiratory infections, and other communicable diseases all occur with much higher frequency in the first year of service. Hospitalizations for neurotic and personality disorders also appear more common in the first year of service, though the difference is less dramatic than for communicable diseases. The reduced number of hospitalizations for neurotic and personality disorders in the second year of service may reflect the fact that most enlistees experience a serious episode related to mental illness early in training are discharged soon after (2000 AMSARA Annual Report, p.23-33). Further, given the observed hospitalizations, most serious mental illnesses appear to manifest within one year of service. The lower number of hospitalizations for pneumonia and influenza may be related to a reduction in group-living situations after basic training. Contrary to the pattern of occurrence shared by hospitalizations for neurotic and personality disorders, pneumonia and influenza, admissions for complications of pregnancy increased dramatically in the second year of service, not surprising given that pregnancy is a temporary medical disqualification at MEPS and a cause for discharge during Basic Combat Training (BCT). The risk of fractures appears similar in both the first and second years of service given that the number of hospitalizations for fractures is similar in both years of follow-up. However, the risk for injuries appears to increase after the first year of service given that the number of hospitalizations for injuries is more than doubled in the second year of follow-up.

TABLE 3.53 HOSPITAL ADMISSIONS AND PERSONS HOSPITALIZED WITHIN ONE AND TWO YEARS OF SERVICE FOR ACTIVE DUTY ENLISTED PERSONNEL ACCESSED IN 2004-2009: BY MEDICAL CATEGORY

ICD-9	Medical category	Within one year of accession		Within two years of accession	
		Hospital admissions	Persons hospitalized	Hospital admissions	Persons hospitalized
308-316	Neurotic or personality disorders	6,080	5,306	8,555	7,060
480-487	Pneumonia and influenza	3,223	3,034	3,418	3,183
680-686	Infections of skin and subcutaneous tissue	2,829	2,661	3,694	3,387
800-829	Fracture	2,065	1,828	4,334	3,275
295-299	Other Psychoses	2,029	1,613	3,386	2,405
830-959	Injuries	1,452	1,247	4,008	2,913
300-302	Neurotic or personality disorders	1,031	829	1,696	1,275
780	General symptoms	1,017	899	1,379	1,162
540-543	Appendicitis	897	871	1,608	1,530
460-466	Acute respiratory infections	820	772	939	868
960-989	Poisoning and toxic effects	804	686	1,387	1,112
630-677	Complications of pregnancy, childbirth, and the puerperium	718	613	8,627	7,448
781-782,786-794,797-799	Nonspecific symptoms	666	544	1,089	852
725,727-729	Rheumatism, excluding the back	651	592	905	794
550-553	Hernia of abdominal cavity	609	584	829	776
470-478	Other diseases of the upper respiratory tract	494	452	749	665
733	Other disorders of bone and cartilage	476	436	622	524
303-304	Alcohol and drug dependence	456	349	957	705
070-079	Other diseases due to viruses and chlamydiae	423	394	500	465
520-529	Diseases of the oral cavity, salivary glands, and jaws	392	373	619	563
	Others	8,667	7,122	15,094	11,523
	Total	35,799	31,209	64,395	52,491

Attrition

Attrition is one of many key outcomes of interest to AMSARA. This section provides a description of all-cause attrition among first-time Active Duty enlisted accessions into the Army, Navy, Marines, and Air Force from 2004 to 2009. Figures 3.1 through 3.7 display the cumulative probability of attrition accessed service member attrition at 90, 180, 365, and 730 days following accession onto Active Duty by service, year of accession, gender, race, age at accession, education, and AFQT percentile score at accession. The probability of attrition at each time point was derived from life table calculations, which adjusted the likelihood of attrition to account for censored observations. Censoring may result from a lack of full follow-up or from certain DMDC transactions that result in the generation of a loss date but are not considered true losses. These pseudo losses include 1) admission to officer commissioning programs; 2) warrant officer programs; 3) entry into service academies; 4) expiration of term of service; 5) retirement; and 6) immediate reenlistment. Loss records generated for these six events were not counted among the attritions reported in the following figures. Totals may vary from figure to figure due to missing variable values.

Figure 3.1 shows the percent of Active Duty accessions gained in 2004-2009 who were lost to attrition at specified days of follow-up after accession. During the first 90 days of service, the Navy had the highest percentage of attrition (8.5%). At 180 days, the percent of attrition was similar across services (~10%). Army accessions had the highest percentage of attrition at both one year (15%) and two years (21%) relative to other services. At two years of service, the percent attrition was highest among the Army (21%) followed by the Navy (18%), Air Force (16%), and Marines (16%).

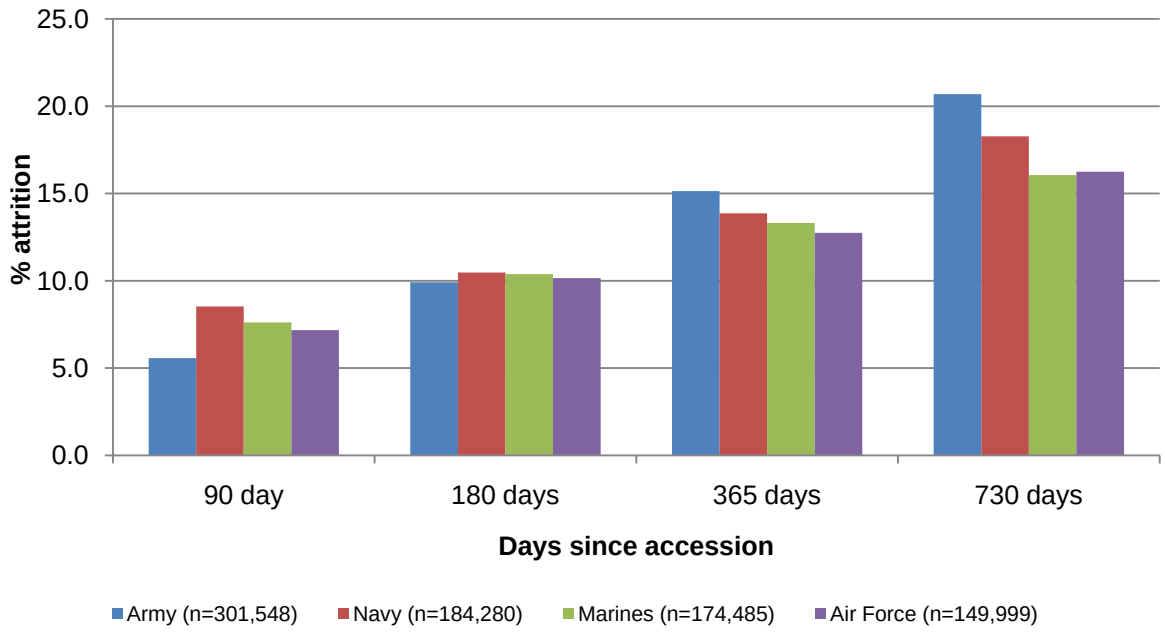

FIGURE 3.1 Attrition among first-time, Active Duty soldiers in FY 2004 – FY 2009 at 90, 180, 365, and 730 days following accession. Separate plots are shown for the Army, Navy, Marines and Air Force

Figure 3.2 describes the attrition profile all active duty enlisted accessions by year of accession. Overall, the attrition rate appears to decrease by year of accession. However the attrition rate was underestimated in 2009, as the result of incomplete follow-up.

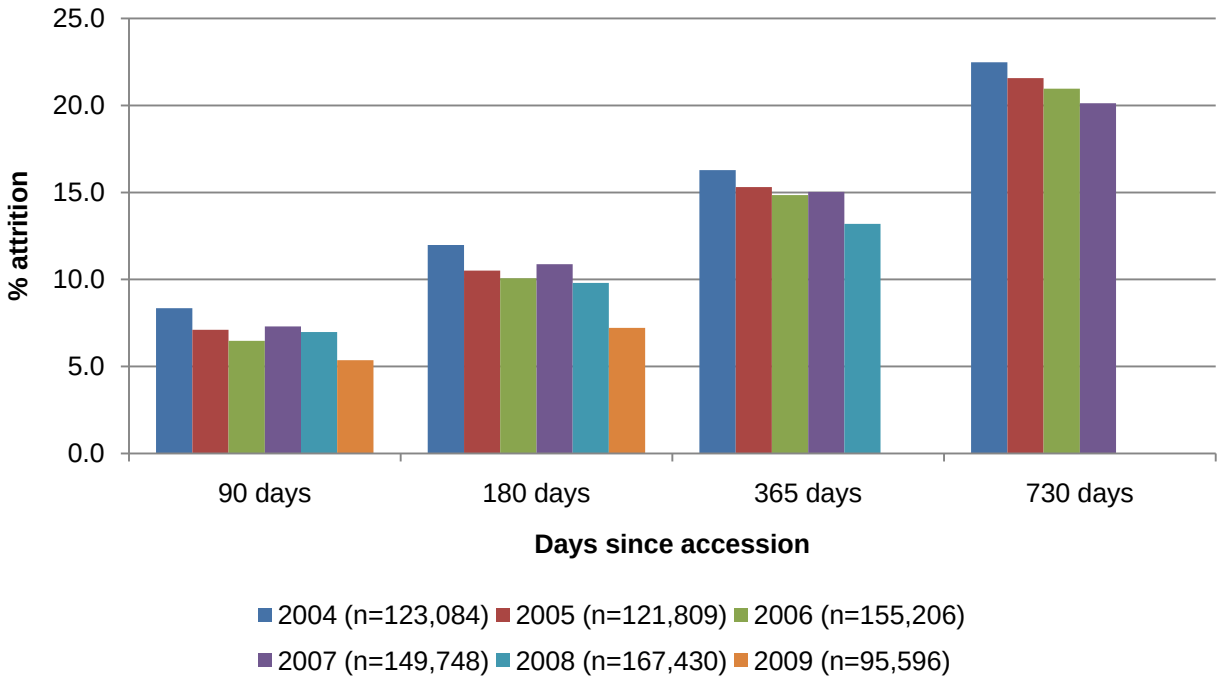

FIGURE 3.2 Attrition among first-time, Active Duty soldiers in FY 2004 – FY 2009 at 90, 180, 365, and 730 days following accession. Separate plots are shown for each year of accession. Attrition for enlistees gaining in 2006 was calculated at 90 and 180 days, only.

Figures 3.3 through 3.7 describe the attrition profile for all Active Duty enlistees by gender, race, age at accession, education at accession, and AFQT score at accession. As seen in Figure 3.3, the proportion of accessions lost is consistently higher at all points of follow-up for females relative to males, even at the earliest point of assessment (90 days) where 10.3% of women were already lost to attrition as compared to only 6.3% of men. At the end of two years of service, cumulative attrition was 26.1% for females and 16.8% for males.

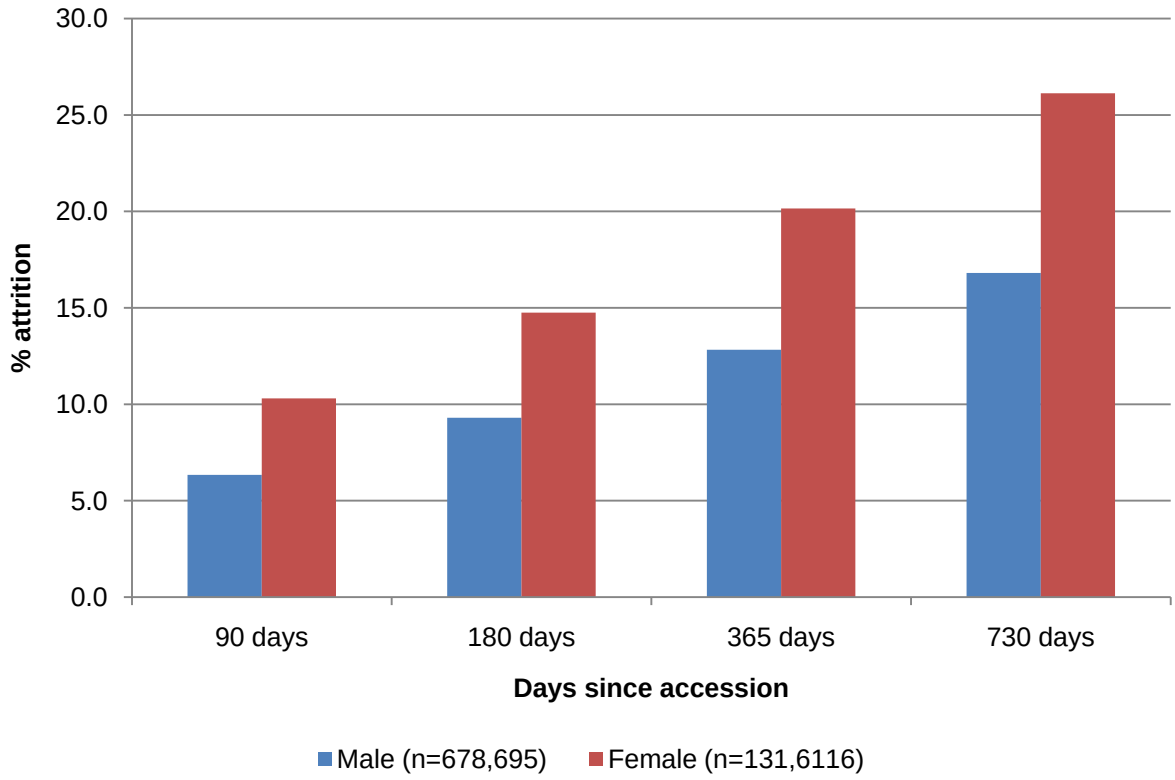

FIGURE 3.3 Attrition among first-time, Active Duty enlisted accession in FY 2004 – FY 2009 at 90, 180, 365, and 730 days following accession.

Attrition was not substantially different across the categories of race (when specified), although individuals who identified themselves of members of any race other than black or white tended to have lower attrition at all points of follow-up (Figure 3.4). Whites consistently had the highest proportion of losses among accessions at 90 days (7.1%) and through 2 years (18.7%).

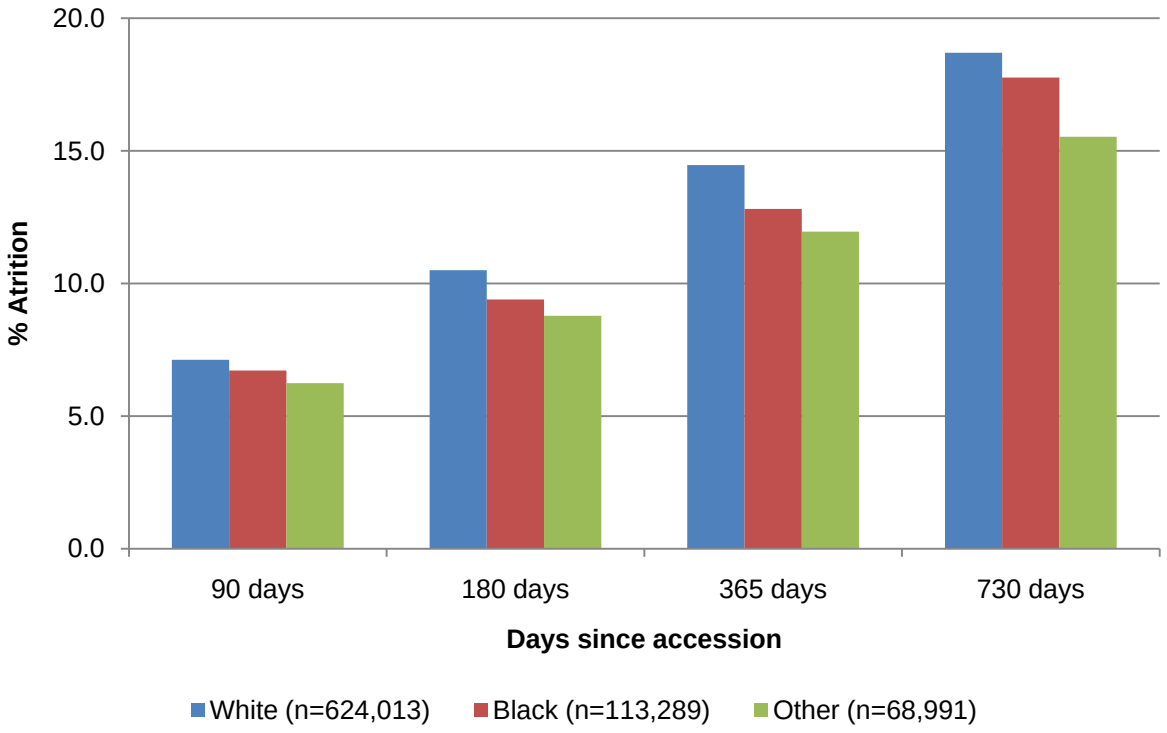

FIGURE 3.4 Attrition among first-time, Active Duty soldiers in FY 2004 – FY 2009 at 90, 180, 365, and 730 days following accession. Separate plots are shown for enlistees who identified themselves as white, black (or as a member of any other race (black).

Cumulative attrition was highest for the 26-30 age group at each time point over the two-year period (Figure 3.5). There appears to be an increasing proportion of attrites with increasing age except for the >30 age group who have a noticeably less proportion of attrites at each point of follow-up.

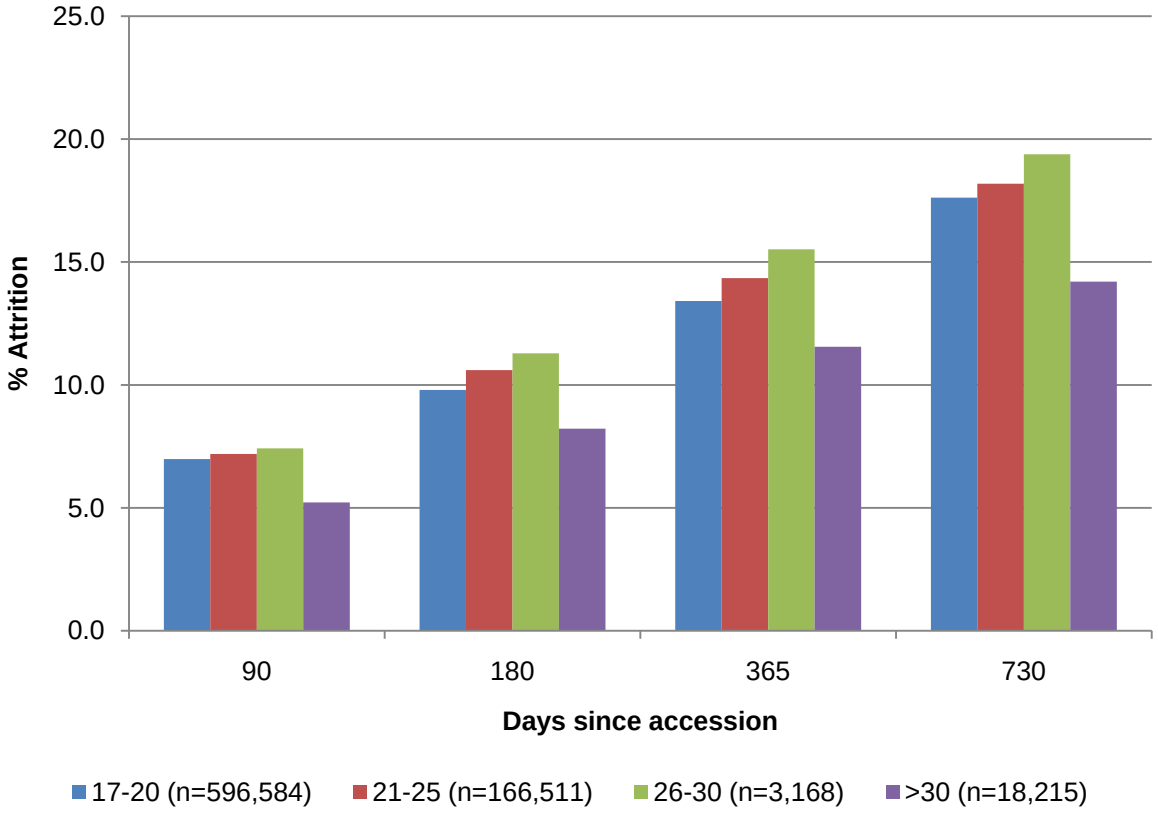

FIGURE 3.5 Attrition among first-time, Active Duty soldiers in FY 2004– FY 2009 at 90, 180, 365, and 730 days following accession. Separate plots are shown for 17-20 year olds, 21-25 year olds, 26-30 year olds and accessions over 30 years of age

When attrition was examined by education level (Figure 3.6) it was found that enlistees with less than a high school education and those with a bachelor's degree or more consistently had the highest levels of attrition. Attrition at all points of follow-up was the lowest for those who had some college.

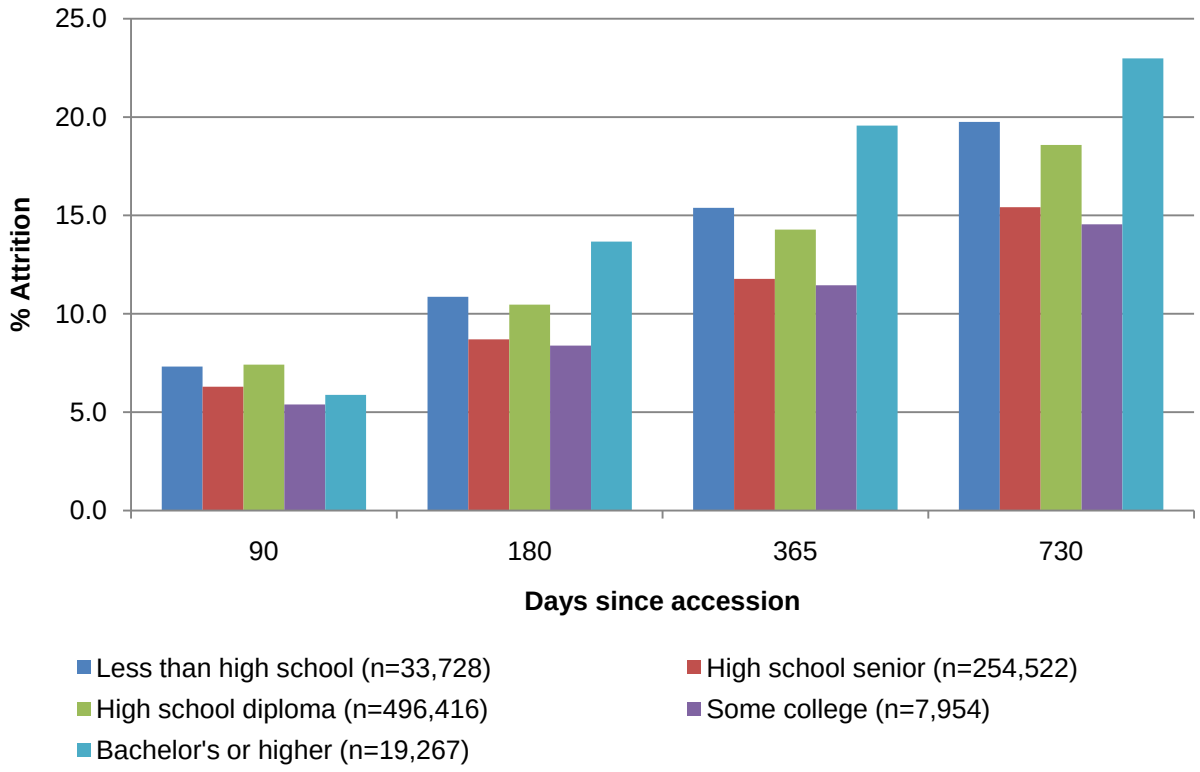

FIGURE 3.6 Attrition among first-time, Active Duty soldiers in FY 2004 – FY 2009 at 90, 180, 365, and 730 days following accession
Those with less than a high school education encompass the following three cases: 1) one who is pursuing completion of the GED or other test-based high school equivalency diploma, vocational school, or secondary school, etc.; 2) one who is not attending high school and who is neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school but is not yet a senior.

Figure 3.7 presents data on the attrition profile of soldiers by AFQT percentile score group. The proportion lost at all points of follow-up was lowest for the highest percentile score group (93-99) and generally increased for progressively lower scoring categories. This was true for each point of follow-up. The increase in the proportion of attritions was highest among the lowest scoring group and lower for the higher scoring groups.

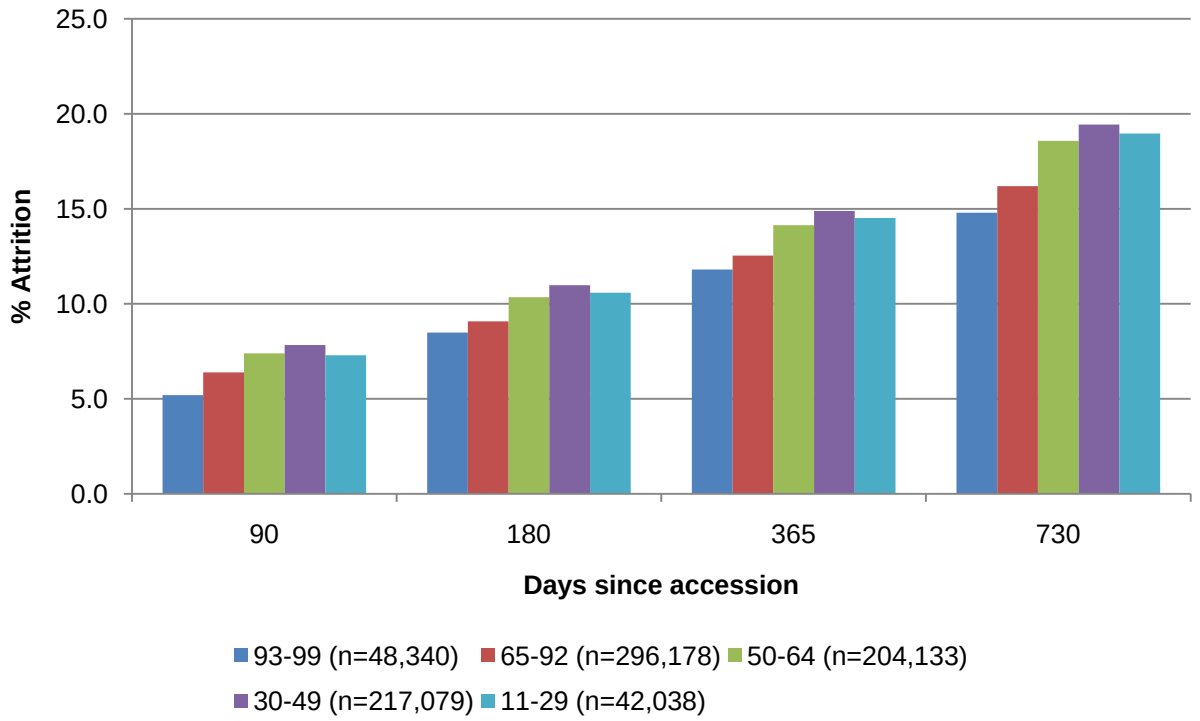

FIGURE 3.7 Attrition among first-time, Active Duty soldiers in FY 2004 – FY 2009 at 90, 180, 365, and 730 days following accession. Separate plots are shown for specified groups based on AFQT score at time of accession in the 93-99, 65-92, 50-64, 31-49, and 11-29 percentile score groups. Note that individuals scoring below the 10th percentile are barred from application.

EPTS Discharges

Discharges for medical conditions Existing Prior to Service (EPTS) are of vital interest to AMSARA. A discharge can be classified as EPTS if the condition was verified to have existed before the recruit began service and if the complications leading to discharge arose no more than 180 days after the recruit began duty. EPTS data reporting has varied by site and over time – see Data Sources section for details (Page 109, Table 4.1).

Part I summarizes the EPTS records provided to AMSARA, regardless of whether a corresponding accession record is available. EPTS records for Active Duty, Reserves, and Nation Guard members are included. Part II only summarizes records for which a corresponding accession record is available; only Active Duty discharges are included.

Part I: EPTS discharges irrespective of accession record

Included among the EPTS records provided to AMSARA are records for soldiers in Initial Entry Training (IET) for the Reserves and National Guard; AMSARA does not currently hold complete accessions data on these components. In addition, some Active Duty enlistee EPTS records do not have a matching accession record. Accordingly, the tables in Part I show the numbers of EPTS discharge records provided by the IET sites, regardless of whether a corresponding accession record is available to AMSARA.

The number of EPTS discharge records by service branch, component, and year of discharge are shown for the period between 2004 and 2009 in Table 3.54. Numbers for each service and component often differ considerably from year to year. For example, the average number of records received for Active Duty Army soldiers in 2006 and 2007 is nearly half the average number received in 2004 and 2005. Fluctuations in the numbers of reported EPTS discharges are also apparent for Active Duty Navy and Air Force. For example, Air Force reported EPTS discharges ranged from 445 in 2005 to 1,115 in 2007. Marine Corps EPTS discharge counts remain relatively constant from 2004-2008.

TABLE 3.54 EPTS DISCHARGES IN 2004 – 2009 BY SERVICE, COMPONENT, AND YEAR

Service	Component	2004	2005	2006	2007	2008	2009†	Total
Army	Active Duty	3,129	2,728	1,481	1,494	1,965	1,419	12,216
	National Guard	670	698	404	503	710	654	3,639
	Reserves	457	389	269	316	356	259	2,046
Navy*	Active Duty	912	1,264	1,268	1,719	1,692	1,409	8,264
	Reserves	1	13	47	167	186	111	525
Marines*	Active Duty	1,449	1,381	1,500	1,196	1,165	705	7,396
	Reserves	219	144	210	158	119	90	940
Air Force	Active Duty	814	445	897	1,115	1,039	566	4,876
	National Guard	3	3	4	5	6	6	27
	Reserves	65	42	65	70	77	61	380
Total		7,719	7,719	7,107	6,145	6,743	7,315	5,280

* Missing components records are not included.

Table 3.55 shows EPTS discharges between 2004 and 2009 for each branch of service by medical categories defined by USMEPCOM. The results are sorted according to the numbers of discharges from the Army, the largest service and the one with the most reported EPTS discharges. Psychiatric discharges were the most common cause of EPTS discharges in the Army, Navy, and Marines, accounting for (24.2%), (17.8%), and (43.6%) of EPTS discharges, respectively. Such EPTS charges accounted for less than (1%) of all EPTS discharges from the Air Force. For this service, 'orthopedic conditions-other' were the leading cause of EPTS discharge (26.4%). As a group, orthopedic conditions, including knee, back, feet, general, and other, account for (44.7%) of discharges from the Army. Orthopedic conditions were also leading causes of EPTS discharges in the Navy (43%), Marines (32.9%), and Air Force (61.4%). The difference in category frequencies may be due in part to differences in how each service categorizes and reports EPTS discharges, particularly discharges for psychiatric conditions (Army and Air Force). Accordingly, differences across services may reflect procedural differences more than true EPTS rates, and any comparisons across services should be made cautiously.

TABLE 3.55 EPTS DISCHARGES IN 2004–2009 BY CATEGORY

	Army		Navy		Marines		Air Force	
Condition	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**
Psychiatric - other	4,359	24.4	1,563	17.9	3,636	43.6	38	0.7
Asthma	2,329	13.0	946	10.8	1,018	12.2	1,391	26.3
Ortho - other	2,223	12.4	1,189	13.6	606	7.3	508	9.6
Ortho - back	1,596	8.9	723	8.3	364	4.4	398	7.5
Ortho - knee	1,543	8.6	819	9.4	398	4.8	623	12.0
Other - general	1,057	5.9	585	6.7	652	7.8	309	5.8
Ortho - feet	790	4.4	332	3.8	99	1.2	635	12.0
Genitourinary system	775	4.3	477	5.5	290	3.5	156	2.9
Neurology - other	607	3.4	390	4.5	361	4.3	523	9.9
Abdomen and viscera	472	2.6	282	3.2	200	2.4	166	3.1
Seizure disorder	387	2.2	113	0.8	74	0.9	57	1.1
Cardiovascular - other	367	2.1	117	1.3	77	0.9	122	2.3
Chest & lung - other	304	1.7	256	2.9	115	1.4	76	1.4
Eyes - other	372	2.1	501	5.7	155	1.9	103	1.9
Skin & lymphatics	192	1.1	195	2.2	90	1.1	120	2.3
Ears - hearing	128	0.7	107	1.2	69	0.8	11	0.2
Cardiovascular - hypertension	242	1.4	59	0.7	44	0.5	20	0.4
Ears - other	46	0.3	81	0.9	49	0.6	5	0.1
Schizophrenia	31	0.2	7	0.1	15	0.2	-	0.0
Eyes - refraction	26	0.1	28	0.3	10	0.1	17	0.3
Other/Missing	55	0.3	19	0.2	14	0.2	5	0.1
Total	17,901		8,789		8,336		5,283	

The medical causes of EPTS discharges for each service are more thoroughly examined by medical conditions that are disqualifying for enlisted service, as listed in the DoDI 6130.3 and DoDI 6130.4. Prior to 2006, EPTS discharge conditions were coded according to the DoDI 6130.3. However, beginning in 2006 the discharge conditions were coded using DoDI 6130.4. Codes corresponding to psychiatric disorders and orthopedic conditions underwent a substantial revision. Given the breadth and scope of disease reclassification, it is difficult if not impossible to directly compare EPTS data from 2006-2009 to that from previous years. Therefore, only dat from 2006 through 2009 are shown.

Table 3.56 shows the top 20 conditions leading to EPTS discharge from the Army for Active Duty enlistees in 2006-2009. The expansion of the codes used to classify several psychiatric and orthopedic conditions resulted in an apparent underrepresentation of such conditions in 2006-2009 relative to previous years in which the DoDI 6130.3 governed the diagnostic coding of medical conditions. However, when the expanded categories are collapsed, the resulting totals appear consistent with the previous classification scheme. While several of the coding revisions possess a one to one correspondence between new and old codes, many of the revisions require additional information that is not readily available to translate between the two versions of the DoDI 6130.

In 2009, depressive disorders; lower leg pain, deformities, and disease; asthma; and disorders of the back were the leading causes of EPTS discharges. The observed prevalence of EPTS discharges for the leading conditions in 2009 was similar to the prevalence of conditions observed in the period from 2006 to 2008, with the exception of discharges for unspecified disorders of the back with increased in prevalence from (4.1%) in 2006 to 2008 to (6.6%) in 2009.

TABLE 3.56 TOP 20 PRIMARY EPTS DISCHARGE CONDITIONS FOR ACTIVE DUTY ENLISTEES IN 2006-2008: ARMY

DoDI 6130.4	Primary EPTS condition	2006-2008		2009	
		n	%	n	%
311	Depressive disorder, not elsewhere classified	441	8.9	134	9.4
719.46	Lower leg pain, deformities, or disease	253	5.1	126	8.9
493	Asthma	350	7.1	115	8.1
724	Unspecified disorders of back	203	4.1	91	6.4
314	ADD/ADHD	36	0.7	45	3.2
719.41	Shoulder pain, disease, injury current	95	1.9	44	3.1
296.8	Bipolar disorder	125	2.5	42	3.0
719.47	Ankle or foot pain, deformities or disease	148	3.0	40	2.8
300.01	Anxiety	90	1.8	39	2.7
296.3	Major depression, recurrent	110	2.2	33	2.3
296.2	Depression, Major, single episode	24	0.5	30	2.1
737	Deviation or curvature of spine	66	1.3	28	2.0
296.9	Mood disorder other and unspecified	91	1.8	26	1.8
309	Adjustment disorders	172	3.5	23	1.6
718.81	Shoulder instability	65	1.3	22	1.6
345	Convulsive disorders	141	2.9	19	1.3
734, 754.6	Pes planus, acquired and congenital	78	1.6	18	1.3
389	Hearing deficiency	31	0.6	17	1.2
719.45	Pain and deformities of the hip and thigh	44	0.9	15	1.1
312	Conduct Disorders	27	0.5	15	1.1
Other	All other EPTS discharge categories	2,350	47.6	497	35.0
	Total for EPTS discharge categories	4,940		1,419	

Table 3.57 shows the top 20 conditions leading to EPTS discharge from the Navy among Active Duty personnel in 2006-2009. Asthma (12.1%) was the leading cause of EPTS discharge in 2009, followed by lower leg pain (9.2%), and unspecified disorders of the back (4.6%).

TABLE 3.57 TOP 20 PRIMARY EPTS DISCHARGE CONDITIONS FOR ACTIVE DUTY ENLISTEES IN 2006- 2009: NAVY

DoDI (6130.4)	Primary EPTS condition	2006-2008		2009	
		n	%	n	%
493	Asthma	447	9.6	170	12.1
719.46	Lower leg pain, deformities, or disease	447	9.6	129	9.2
724	Unspecified disorders of back	232	5.0	65	4.6
346	Headaches, migraines	60	1.3	52	3.7
786.5	Chest pain	58	1.2	45	3.2
719.47	Ankle or foot pain, deformities or disease	121	2.6	34	2.4
371.6	Keratoconus of any degree	81	1.7	32	2.3
726.6	Knee limitation of Motion due to disease	40	0.9	32	2.3
737	Deviation or curvature of spine	100	2.1	31	2.2
784.0	Headaches, recurrent	29	0.6	31	2.2
796.9	Miscellaneous codes	26	0.6	28	2.0
V22	Pregnancy	80	1.7	28	2.0
718.81	Shoulder instability	68	1.5	24	1.7
592	Nephrocalcinosis	35	0.7	23	1.6
780.2	Syncope	52	1.1	23	1.6
719.41	Shoulder pain, disease, injury current	54	1.2	22	1.6
728	Muscular paralysis, contracture or atrophy current of history	21	0.4	18	1.3
789.0	Abdominal pain or Groin pain	23	0.5	17	1.2
831	Shoulder dislocation	47	1.0	16	1.1
345	Convulsive disorders	56	1.2	15	1.1
Other	All other EPTS discharge categories	2,602	55.6	574	40.7
	Total for EPTS discharge categories	4,679		1,409	

Table 3.58 shows the top 20 conditions leading to EPTS discharge from the Marine Corps among Active Duty enlistees in 2006-2009. Depressive disorders, suicidal behavior, personality disorders, and asthma were the top four reasons for EPTS discharge among Marines in 2009.

TABLE 3.58 TOP 20 PRIMARY EPTS DISCHARGE CONDITIONS FOR ACTIVE DUTY ENLISTEES IN 2006-2009: MARINES

DoDI (6130.4)	Primary EPTS condition	2006-2008		2009	
		n	%	n	%
311	Depressive disorder, not elsewhere classified	471	12.2	86	12.2
300.9	Suicide behavior, gesture or attempt	183	4.7	47	6.7
301	Personality disorders	183	4.7	47	6.7
493	Asthma	486	12.6	46	6.5
309	Adjustment disorders	117	3.0	44	6.2
300.01	Anxiety	128	3.3	32	4.5
719.46	Lower leg pain, deformities, or disease	87	2.3	19	2.7
989.5	Allergic manifestations	85	2.2	17	2.4
V65.4	Mood disorders requiring outpatient care	8	0.2	17	2.4
314	ADD/ADHD	113	2.9	15	2.1
724	Unspecified disorders of back	82	2.1	15	2.1
296.8	Bipolar disorder	108	2.8	12	1.7
371.6	Keratoconus of any degree	19	0.5	9	1.3
296.9	Mood disorder other and unspecified	11	0.3	8	1.1
737	Deviation or curvature of spine	28	0.7	8	1.1
780.2	Syncope	27	0.7	8	1.1
831	Shoulder dislocation	25	0.6	8	1.1
733.9	Retain hardware	10	0.3	7	1.0
788.30	Urinary incontinence, unspecified	22	0.6	7	1.0
V22	Pregnancy	25	0.6	7	1.0
Other	All other EPTS discharge categories	1,643	42.6	246	34.9
	Total for EPTS discharge categories	3,861		705	

Table 3.59 shows the top 20 conditions leading to EPTS discharge of Active Duty enlistees from the Air Force in 2006-2009. The primary causes for EPTS discharge in 2009 were asthma; pes planus; lower leg pain, deformities, or disease; and headaches. In contrast to other services, psychiatric conditions made up only a small percentage of EPTS discharges in all years considered. This difference may be attributable to active screening for these conditions in basic training at Lackland Air Force Base and in the categorization of such conditions as administrative rather than EPTS discharges by the Air Force.

TABLE 3.59 TOP 20 PRIMARY EPTS DISCHARGE CONDITIONS FOR ACTIVE DUTY ENLISTEES IN 2006- 2009: AIR FORCE

DoDI (6130.4)	Primary EPTS condition	2006-2008		2009	
		n	%	n	%
493	Asthma	748	24.5	105	18.6
734, 754.6	Pes planus, acquired and cogenital	278	9.1	60	10.6
346	Headaches, migraines	227	7.4	50	8.8
719.46	Lower leg pain, deformities, or disease	309	10.1	49	8.7
724	Unspecified disorders of back	155	5.1	28	4.9
737	Deviation or curvature of spine	46	1.5	23	4.1
728.71	Plantar fasciitis, current	46	1.5	13	2.3
784.0	Headaches, recurrent	34	1.1	11	1.9
530.81	Gastroesophageal reflux disease (GERD)	16	0.5	10	1.8
719.47	Ankle or foot pain, deformities or disease	75	2.5	10	1.8
718.81	Shoulder instability	34	1.1	9	1.6
042	Human Immunodeficiency Virus disease	4	0.1	7	1.2
732.4	Osteochondritis of the tibial tuberosity	30	1.0	7	1.2
796.9	Miscellaneous codes	22	0.7	7	1.2
354	Carpal and cubital syndromes/wrist neuropathies	19	0.6	6	1.1
719.43	Forearm pain disease, injury current/wrist pain	20	0.7	6	1.1
735.0	Hallux valgus	26	0.9	6	1.1
692	Eczema	8	0.3	5	0.9
719.41	Shoulder pain, disease, injury current	34	1.1	5	0.9
455	Hemorrhoids, internal or external, when large, sym or Hx of bleeding	2	0.1	4	0.7
Other	All other EPTS discharge categories	918	30.1	145	25.6
	Total for EPTS discharge categories	3,051		566	

Part II: EPTS discharges with an accession record

EPTS discharges among enlistees who accessed during 2004-2009 are summarized in Tables 3.60 through 3.66. Note that all references to years refer to the year of accession rather than the year of discharge. Discharge numbers reflect only discharges occurring among individuals with an accession record in the specific year. As mentioned, an EPTS discharge can only be obtained within the first 180 days of service.

Relative risks are used to compare the likelihood of EPTS discharge between demographic groups. The baseline group chosen for each comparison depends on the factor being considered. For factors with some inherent order (e.g., age group, which ranges from younger to older) it is the first or last group in that order, as appropriate. Otherwise, the baseline group is generally the largest group. All comparisons, particularly those by service branch, should be taken in light of EPTS data reporting fluctuations by service and over time (see "Data Sources" for details).

Table 3.60 shows EPTS discharges reported among individuals accessed into enlisted service during each year from 2004 through 2009. EPTS discharge data for 2009 are not complete due to delays in reporting; therefore the total discharges are less than expected. Other than an apparent decrease in frequency in 2005, no obvious pattern seems to exist in the number of EPTS discharges reported in 2004 through 2008. The percent of accessions receiving an EPTS discharge remained relatively stable over the same time period. The percentage of accessions discharged for an EPTS condition was lowest in 2006.

TABLE 3.60 EPTS DISCHARGES BY ACCESSION YEAR

Year of accession	Accessions	Discharges	% Discharged
2004	149,705	4,883	3.3
2005	124,317	4,121	3.3
2006	161,786	4,689	2.9
2007	161,605	5,518	3.4
2008	165,667	5,151	3.1
2009	160,004	3,572	2.2
Total	923,084	27,934	-

Enlisted accessions between 2004 and 2009 ending in EPTS discharges are shown in Table 3.61 for each branch of service. The risk of discharge in each service was compared to the Army. Navy and Marines had similar risks of EPTS discharge that were significantly increased relative to Army. Risk of EPTS discharge among Air Force relative to Army was slightly elevated and statistically significant.

TABLE 3.61 ENLISTED ACCESSIONS IN 2004–2009 ENDING IN EPTS DISCHARGE: BY SERVICE

Service	Accessions	Discharged	% Discharged	Relative risk	95% CI
Army	349,786	9,014	2.6	1.00	-
Navy	209,686	7,427	3.5	1.37	(1.33,1.42)
Marines	193,708	6,898	3.6	1.38	(1.34,1.43)
Air Force	169,904	4,595	2.7	1.05	(1.01,1.09)

Table 3.62 shows the numbers of accessions and subsequent EPTS discharges reported by gender. The risk of EPTS discharge is significantly higher among females relative to males.

TABLE 3.62 ENLISTED ACCESSIONS IN 2004–2009 ENDING IN EPTS DISCHARGE: GENDER

Gender	Accessions	Discharged	% Discharged	Relative risk	95% CI
Male	773,998	20,642	2.7	1.00	-
Female	149,084	7,292	4.9	1.83	(1.79,1.88)

The number of EPTS discharges and accessions are shown by race for the period of 2004 to 2009 in Table 3.63. Relative to whites, the risk of EPTS discharges among all other racial groups was significantly lower.

TABLE 3.63 ENLISTED ACCESSIONS IN 2004–2009 ENDING IN EPTS DISCHARGE: RACE

Race[†]	Accessions	Discharged	% Discharged	Relative risk	95% CI
White	707,262	21,972	3.1	1.00	-
Black	132,186	3,782	2.9	0.92	(0.89,0.95)
Other	78,638	2,045	2.6	0.84	(0.80,0.88)
Missing or declined	4,998	135	2.7	0.87	(0.74,1.03)

[†] Note: New categories for race were available beginning in 2003. However, greater numbers of applicants chose not to indicate their race.

Table 3.64 shows the numbers of accessions and EPTS discharges by age for the period of 2004 to 2009. The risk of EPTS discharge is significantly elevated in the oldest age groups relative to the youngest age group. However, the risk of discharge among 21-25 year olds is slightly lower than that of the youngest age group though this decrease in risk is not statistically significant.

TABLE 3.64 ENLISTED ACCESSIONS IN 2004–2009 ENDING IN EPTS DISCHARGE: AGE

Age group	Accessions	Discharged	% Discharged	Relative risk	95% CI
17 – 20	625,579	18,945	3.0	1.00	-
21 – 25	234,683	6,897	2.9	0.97	(0.94,1.00)
26 – 30	45,271	1,493	3.3	1.09	(1.03,1.15)
< 30	17,551	599	3.4	1.13	(1.04,1.22)

The number of EPTS discharges and accessions are shown by education level for 2004 to 2009 in Table 3.65. Relative to those accessions with a high school education at gain, enlistees with education beyond high school were more at significantly decreased risk of EPTS discharge. Risk of EPTS discharge among enlistees entering onto Active Duty service with less than a high school diploma, there was no difference in the risk of EPTS discharge as compared to enlistees with a high school diploma.

TABLE 3.65 ENLISTED ACCESSIONS IN 2004–2009 ENDING IN EPTS DISCHARGE: EDUCATION LEVEL

Education level	Accessions	Discharged	% Discharged	Relative risk	95% CI
Below HS grad[†]	6,550	236	3.6	1.16	(1.03,1.32)
HS Diploma	801,956	24,817	3.1	1.00	-
Some college	27,518	806	2.9	0.95	(0.88,1.01)
Bachelor's and higher	21,554	371	1.7	0.56	(0.50,0.62)
Missing	65,507	1,704	2.6	0.84	(0.80,0.88)

[†] Encompasses the following three cases: 1) one who is pursuing completion of the GED or other test-based high school equivalency diploma, vocational school, or secondary school, etc.; 2) one who is not attending high school and who is neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school but is not yet a senior.

Table 3.66 shows the enlisted accessions ending in EPTS discharge for the period between 2004 and 2009 by AFQT score. Those scoring in the highest percentile groups (93-99) had the lowest risk of EPTS discharge. Each lower percentile group had a significantly higher risk of EPTS discharge relative to the highest scoring group. The risk of EPTS discharge subsequently increases with each decreasing percentile category.

TABLE 3.66 ENLISTED ACCESSIONS IN 2004–2009 ENDING IN EPTS DISCHARGE: AFQT SCORE

AFQT score	Accessions	Discharged	% Discharged	Relative risk	95% CI
93 – 99	56,263	1,215	2.2	1.00	-
65 – 92	339,914	9,357	2.8	1.27	(1.20,1.35)
50 – 64	241,514	7,828	3.2	1.50	(1.41,1.59)
30 – 49	264,406	9,105	3.4	1.59	(1.50, 1.60)
11 – 29[†]	13,418	378	2.8	1.30	(1.16,1.46)
Missing	7,570	51	0.7	0.31	(0.24,0.41)

[†] Individuals scoring in the 10th percentile or lower are prohibited from applying, although some exceptions have been noted.

Disability Discharge Considerations

Data on disability discharge considerations are compiled separately for each service by its disability agency. The Army and Air Force disability agencies have provided data on all disability discharge considerations during 2004-2009 since 1995. The Navy/Marines agency has provided data only for all actions for the time period covered by this report for the first time in FY 2009. Consequently, disability discharge data for all services are summarized.

Part I: Disability discharges irrespective of an accession record

Numbers are presented irrespective of accession records; the years shown refer to the year of disability discharge consideration. The individuals being discharged could have been in the service for any number of years and have a variety of dispositions at discharge including permanent disability retired, temporary disability retired, severance, and separated without benefit. Medical diagnosis categories are taken from the Veterans Administration Schedule for Rating Disability (VASRD; see the "Disability" section in "Data Sources"). The grouping of VASRD codes was updated in the CY 2007 Annual Report. The current definitions are provided in the Data Sources Section. The revisions took into account the use of analogous codes which are unspecified disorders within a general diagnostic category. For example, code 5399 would indicate an unspecified muscle injury (in isolation) or a previously undefined condition (when in combination with a second or third code).

Table 3.67 shows the leading diagnoses for disability discharge for the Army. Data are shown in aggregate for 2004-2008 and separately for 2009. Collectively, impairments and disease of the spine, skull, limbs, and extremities, as well as other diseases of the musculoskeletal system (including joint replacement) were by far the most common diagnoses cited for disability discharges in both 2009 (32.3%) and the previous five-year period (34.4%). Prosthetic implants and diseases of the musculoskeletal system were the second leading cause of disability in 2004-2008 accounting for (20.9%) of discharges during the time period, but was the third leading cause of discharge in 2009 (17.7%). Affective and nonpsychotic mental disorders were the second leading cause of disability discharges in 2009, accounting for (22.7%) of discharges representing a substantial increase as compared to 2004-2008 when these disorders constituted only (7.8%) of discharges.

TABLE 3.67 PRIMARY DIAGNOSIS CATEGORIES FOR DISABILITY DISCHARGES FROM ACTIVE DUTY IN 2004–2008 VS. 2009 (IRRESPECTIVE OF LENGTH OF SERVICE): ARMY

Diagnosis category	2004-2008		2009	
	Count	%	Count	%
Impairment, limitation, ankylosis of joints, spine, skull, limbs, and extremities	20,856	34.4	3,988	32.3
Affective and nonpsychotic mental disorders	4,730	7.8	2,798	22.7
Prosthetic Implants and diseases of the musculoskeletal system	12,631	20.9	2,189	17.7
Organic Diseases of the Central Nervous System	2,372	3.9	452	3.7
Diseases of the peripheral nerves	1,923	3.2	374	3.0
Diseases of the trachea and bronchi	2,920	4.8	324	2.6
Schizophrenia and other psychotic disorders	2,298	3.8	218	1.8
Diseases of the digestive system	1,360	2.2	208	1.7
Miscellaneous neurological disorders	1,164	1.9	191	1.5
Convulsive disorders	812	1.3	157	1.3
Muscle injuries	987	1.6	156	1.3
Diseases of the heart	955	1.6	146	1.2
Amputation or anatomical loss of upper and lower extremities	387	0.6	127	1.0
Diseases of the endocrine system	928	1.5	126	1.0
Diseases of the genitourinary system	719	1.2	107	0.9
Diseases of the skin	554	0.9	114	0.9
Diseases of the respiratory system	680	1.1	98	0.8
Diseases of the Eye or loss of vision	556	0.9	89	0.7
Infectious diseases, immune disorders, and nutritional deficiencies	1,118	1.8	74	0.6
Diseases of the arteries and veins	596	1.0	66	0.5
Organic psychotic disorders	437	0.7	52	0.4
The hemic and lymphatic systems	516	0.9	48	0.4
Gynecological conditions and disorders of the breast	182	0.3	32	0.3
Diseases of the cranial nerves	201	0.3	23	0.2
Diseases of the Ear	100	0.2	18	0.1
Diseases of the nose and throat	96	0.2	8	0.1
Other and unspecified disorders of the sensory organs	73	0.1	7	0.1
Dental and oral conditions	30	0.0	4	0.0
Diseases of other sense organs (smell and taste)	1	0.0	1	0.0
Injury to the mouth, lips, tongue, and esophagus	33	0.1	3	0.0
Other/Missing	358	0.6	154	1.2
Total	60,573		12,352	

Table 3.68 shows the leading diagnoses for disability discharge for the Air Force. Disability data from 2004 to 2008 are presented in aggregate while 2009 data is summarized separately. Impairments and disease of the spine, skull, limbs, and extremities accounted for (22.2%) of disability discharges in 2009 and (25.4%) in the period from 2004 to 2008. Affective and nonpsychotic mental disorders were the second most common discharge condition in 2004-2008 (19.7%) and in 2009 (16.9%). Discharges for prosthetic implants and diseases of the musculoskeletal system were the third leading cause of disability discharge (9.0%) in 2009 and in 2004-2008 (9.6%).

TABLE 3.68 PRIMARY DIAGNOSIS CATEGORIES FOR DISABILITY DISCHARGES FROM ACTIVE DUTY IN 2004–2008 VS. 2009 (IRRESPECTIVE OF LENGTH OF SERVICE): AIR FORCE

Diagnosis category	2004-2008		2009	
	Count	%	Count	%
Impairment, limitation, ankylosis of joints, spine, skull, limbs, and extremities	3,122	25.4	697	22.2
Affective and nonpsychotic mental disorders	2,419	19.7	532	16.9
Prosthetic Implants and diseases of the musculoskeletal system	1,184	9.6	284	9.0
Diseases of the trachea and bronchi	1,128	9.2	263	8.4
Diseases of the digestive system	512	4.2	145	4.6
Diseases of the endocrine system	289	2.4	138	4.4
Diseases of the heart	266	2.2	117	3.7
Diseases of the respiratory system	197	1.6	117	3.7
Diseases of the peripheral nerves	388	3.2	104	3.3
Organic Diseases of the Central Nervous System	349	2.8	105	3.3
Miscellaneous neurological disorders	446	3.6	97	3.1
Convulsive disorders	275	2.2	93	3.0
Diseases of the genitourinary system	142	1.2	77	2.4
Diseases of the arteries and veins	120	1.0	46	1.5
Diseases of the skin	102	0.8	48	1.5
Muscle injuries	302	2.5	46	1.5
Schizophrenia and other psychotic disorders	284	2.3	44	1.4
The hemic and lymphatic systems	136	1.1	43	1.4
Diseases of the Eye or loss of vision	97	0.8	40	1.3
Infectious diseases, immune disorders, and nutritional deficiencies	68	0.6	34	1.1
Gynecological conditions and disorders of the breast	83	0.7	22	0.7
Amputation or anatomical loss of upper and lower extremities	24	0.2	11	0.3
Diseases of the Ear	72	0.6	11	0.3
Other/Missing	17	0.1	9	0.3
Diseases of the cranial nerves	101	0.8	6	0.2
Organic psychotic disorders	110	0.9	7	0.2
Diseases of the nose and throat	20	0.2	3	0.1
Injury to the mouth, lips, tongue, and esophagus	5	0.0	4	0.1
Dental and oral conditions	12	0.1	1	0.0
Diseases of other sense organs (smell and taste)	0	0.0	1	0.0
Other and unspecified disorders of the sensory organs	0	0.0	1	0.0
Total	**12,270**	**-**	**3,146**	**-**

Table 3.69 shows the leading diagnoses for disability discharge for the Navy. Disability data from 2004 to 2008 are presented in aggregate while 2009 data is summarized separately. Impairments and disease of the spine, skull, limbs, and extremities accounted for 21.8% of disability discharges in 2009 and (26.2%) in the period from 2004 to 2008. Affective and nonpsychotic mental disorders were the second most common discharge condition in 2004-2008 (13.2%) and in 2009 (20.8%). Discharges for prosthetic implants and diseases of the musculoskeletal system were the third leading cause of disability discharge (12.1%) in 2009 and in 2004-2008(9.1%).

TABLE 3.69 PRIMARY DIAGNOSIS CATEGORIES FOR DISABILITY DISCHARGES FROM ACTIVE DUTY IN 2004–2008 VS. 2009 (IRRESPECTIVE OF LENGTH OF SERVICE): NAVY

Diagnosis category	2004-2008		2009	
	Count	%	Count	%
Impairment, limitation, ankylosis of joints, spine, skull, limbs, and extremities	2,813	26.2	407	21.8
Affective and nonpsychotic mental disorders	1,420	13.2	387	20.8
Prosthetic Implants and diseases of the musculoskeletal system	979	9.1	226	12.1
Diseases of the digestive system	584	5.4	131	7.0
Diseases of the peripheral nerves	547	5.1	111	6.0
Organic Diseases of the Central Nervous System	632	5.9	89	4.8
Convulsive disorders	541	5.0	75	4.0
Schizophrenia and other psychotic disorders	392	3.7	62	3.3
Miscellaneous neurological disorders	321	3.0	57	3.1
Diseases of the endocrine system	533	5.0	54	2.9
Diseases of the heart	184	1.7	32	1.7
Diseases of the trachea and bronchi	235	2.2	29	1.6
Diseases of the genitourinary system	218	2.0	26	1.4
Diseases of the arteries and veins	124	1.2	23	1.2
Diseases of the skin	141	1.3	21	1.1
The hemic and lymphatic systems	166	1.5	20	1.1
Diseases of the Eye or loss of vision	115	1.1	18	1.0
Muscle injuries	167	1.6	19	1.0
Infectious diseases, immune disorders, and nutritional deficiencies	136	1.3	16	0.9
Diseases of the cranial nerves	74	0.7	15	0.8
Diseases of the respiratory system	135	1.3	15	0.8
Gynecological conditions and disorders of the breast	63	0.6	7	0.4
Diseases of the Ear	44	0.4	6	0.3
Other and unspecified disorders of the sensory organs	29	0.3	5	0.3
Amputation or anatomical loss of upper and lower extremities	39	0.4	4	0.2
Organic psychotic disorders	54	0.5	3	0.2
Dental and oral conditions	14	0.1	2	0.1
Diseases of the nose and throat	4	0.0	2	0.1
Injury to the mouth, lips, tongue, and esophagus	8	0.1	1	0.1
Other/Missing	16	0.1	2	0.1
Diseases of other sense organs (smell and taste)	1	0.0	0	0.0
Total	**10,729**	**-**	**1,865**	**-**

Table 3.70 shows the leading diagnoses for disability discharge for the Marines. Disability data from 2004 to 2008 are presented in aggregate while 2009 data is summarized separately. Affective and nonpsychotic mental disorders were the leading cause of discharge in 2009 (25.4%) as compared to 2004-2008 when impairments and disease of the spine, skull, limbs, and extremities were the leading cause of discharge accounting for 35.7% of disability discharges. The second leading cause of discharge in 2009 was impairments and disease of the spine, skull, limbs, and extremities (22.1%) while affective and nonpsychotic mental disorders were the second leading cause of discharge in the previous five years (12.7%). Discharges for prosthetic implants and diseases of the musculoskeletal system were the third leading cause of disability discharge (17.5%) in 2009 and in 2004-2008 (9.3%).

TABLE 3.70 PRIMARY DIAGNOSIS CATEGORIES FOR DISABILITY DISCHARGES FROM ACTIVE DUTY IN 2004–2008 VS. 2009 (IRRESPECTIVE OF LENGTH OF SERVICE): MARINES

Diagnosis category	2004-2008		2009	
	Count	%	Count	%
Affective and nonpsychotic mental disorders	1,061	12.7	528	25.4
Impairment, limitation, ankylosis of joints, spine, skull, limbs, and extremities	2,985	35.7	459	22.1
Prosthetic Implants and diseases of the musculoskeletal system	782	9.3	363	17.5
Diseases of the peripheral nerves	701	8.4	189	9.1
Organic Diseases of the Central Nervous System	463	5.5	110	5.3
Convulsive disorders	309	3.7	47	2.3
Schizophrenia and other psychotic disorders	163	1.9	43	2.1
Diseases of the digestive system	211	2.5	41	2.0
Muscle injuries	222	2.7	38	1.8
Diseases of the Eye or loss of vision	92	1.1	30	1.4
Miscellaneous neurological disorders	108	1.3	30	1.4
Diseases of the endocrine system	220	2.6	26	1.3
Diseases of the trachea and bronchi	251	3.0	28	1.3
Diseases of the skin	111	1.3	22	1.1
Amputation or anatomical loss of upper and lower extremities	63	0.8	19	0.9
Diseases of the genitourinary system	118	1.4	19	0.9
Diseases of the cranial nerves	72	0.9	16	0.8
Diseases of the heart	67	0.8	14	0.7
Diseases of the respiratory system	61	0.7	11	0.5
Diseases of the arteries and veins	92	1.1	8	0.4
The hemic and lymphatic systems	76	0.9	8	0.4
Dental and oral conditions	15	0.2	6	0.3
Infectious diseases, immune disorders, and nutritional deficiencies	37	0.4	7	0.3
Gynecological conditions and disorders of the breast	10	0.1	5	0.2
Diseases of the Ear	10	0.1	3	0.1
Diseases of the nose and throat	7	0.1	2	0.1
Organic psychotic disorders	41	0.5	2	0.1
Other/Missing	14	0.2	3	0.1
Injury to the mouth, lips, tongue, and esophagus	4	0.0	1	0.0
Other and unspecified disorders of the sensory organs	6	0.1	1	0.0
Tuberculosis	1	0.0	1	0.0
Total	**8,373**	**-**	**2,080**	**-**

Part II: Disability evaluations with an accession record

Numbers of medical disability evaluations within the first year of service among Army, Air Force, Navy and Marine Corps personnel who accessed during 2004 to 2009 are presented in Tables 3.71 through 3.77. Relative risks are used to compare the likelihood of disability discharge between demographic groups. The baseline group chosen for each comparison depends on the factor being considered. For factors with some inherent order (e.g., age group, which ranges from younger to older) it is the first or last group in that order, as appropriate. Otherwise, the baseline group is generally the largest group. Disability discharge data were unavailable for the Marines and Navy (see the "Disability" section in "Data Sources").

Table 3.71 shows the numbers of disability evaluations reported among individuals accessed into the Army, Air Force, Navy, and Marine Corps enlisted service during each year from 2004 to 2009. Results are shown for each year of accession. The percentages of disability evaluations within one year of service are increasing over time, except for 2008. Duty service for accessions in 2009 is underestimated due to incomplete follow-up time.

TABLE 3.71 DISABILITY EVALUATIONS FOR ACTIVE DUTY WITHIN ONE YEAR OF SERVICE IN 2004–2009: BY YEAR

Year of accession	Total accessed	Discharged within one year of accession	
		Count	%
2004	149,705	833	0.56
2005	124,317	698	0.56
2006	161,786	991	0.61
2007	161,605	1,053	0.65
2008	165,667	972	0.59
2009	149,705	395	0.25

Table 3.72 shows the Active Duty enlisted accessions that underwent disability evaluation by service. Relative to Army enlistees, enlisted accessions who undergo disability discharge during the first year of service were significantly less likely among enlistees from all other services.

TABLE 3.72 DISABILITY EVALUATIONS FOR ACTIVE DUTY WITHIN ONE YEAR OF SERVICE IN 2004–2009: BY SERVICE

Service	Total accessions	Discharged within one year of accession			
		Count	%	Relative risk	95% CI
Army	349,786	3,007	0.86	1.00	-
Air Force	169,904	765	0.45	0.53	(0.48,0.57)
Marine	193,708	829	0.43	0.50	(0.46,0.54)
Navy	209,686	341	0.16	0.19	(0.17,0.21)

The demographic characteristics of Active Duty enlisted accessions who underwent disability evaluation within one year of service are shown in Tables 3.73 through 3.77. Females were nearly three times more likely to undergo disability evaluation than males. The risk of disability evaluation also increased with increasing age. On comparison of the risk of disability evaluations across race groups, whites have a significantly higher risk of discharge compared to all other racial groups except for those who declined to report race. With respect to the level of education attained by accession, the highest risk of disability evaluation was observed for enlistees who had some level of college education prior to accession. The lowest risk of disability evaluation was for accessions with less than a high school education.

TABLE 3.73 DISABILITY EVALUATIONS FOR ACTIVE DUTY WITHIN ONE YEAR OF SERVICE IN 2004–2009: BY GENDER

Gender	Total accessions	Discharged within one year of accession			
		Count	%	Relative risk	95% CI
Male	773,998	3,194	0.41	1.00	-
Female	149,084	1,747	1.17	2.84	(2.68,3.01)

TABLE 3.74 DISABILITY EVALUATIONS FOR ACTIVE DUTY WITHIN ONE YEAR OF SERVICE IN 2004 – 20089: BY AGE

Age	Total accessions	Discharged within one year of service			
		Count	%	Relative risk	95% CI
17 – 21	625,446	2,790	0.45	1.00	-
21 – 25	234,802	1,476	0.63	1.40	(1.32,1.49)
26 – 30	45,281	414	0.90	2.03	(1.83,2.25)
> 30	17,555	262	1.47	3.30	(2.91,3.75)

TABLE 3.75 DISABILITY EVALUATIONS FOR ACTIVE DUTY WITHIN ONE YEAR OF SERVICE IN 2004 – 2009: BY RACE

Race[†]	Total accession	Discharged within one year of service			
		Count	%	Relative risk	95% CI
White	707,262	4,169	0.59	1.00	-
Black	132,186	456	0.34	0.58	(0.53,0.64)
Other	78,638	271	0.34	0.58	(0.52,0.66)
Declined	4,998	46	0.91	1.55	(1.16,2.08)

[†] Note: New categories for race were available beginning in 2003. However, greater numbers of applicants chose not to indicate their race.

TABLE 3.76 DISABILITY EVALUATIONS FOR ACTIVE DUTY WITHIN ONE YEAR OF SERVICE IN 2004 – 2009: BY EDUCATION

Education level	Total accessions	Discharged within one year of service			
		Count	%	Relative risk	95% CI
Below HS graduate†	6,550	20	0.31	0.62	(0.40,0.96)
HS diploma	801,956	3,981	0.50	1.00	-
Some college	27,518	204	0.74	1.49	(1.30,1.72)
Bachelor's and higher	21,554	130	0.57	1.15	(0.97,1.37)
Missing	65,506	607	0.92	1.85	-

† Encompasses the following three cases: 1) one who is pursuing completion of the GED or other test-based high school equivalency diploma, vocational school, or secondary school, etc.; 2) one who is not attending high school and who is neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school but is not yet a senior.

Table 3.77 shows the numbers and likelihood of disability evaluations within the first year of service by AFQT percentile score. All the discharge rates were similar to each other and no significant difference was found when comparing the likelihood of disability discharge within one year of service between any two AFQT score categories.

TABLE 3.77 DISABILITY EVALUATIONS FOR ACTIVE DUTY WITHIN ONE YEAR OF SERVICE IN 2004–2009: BY AFQT SCORE

AFQT score	Total accessions	Discharged within one year of service			
		Count	%	Relative risk	95% CI
93 – 99	56,263	294	0.52	1.00	-
65 – 92	339,914	1,870	0.55	1.06	(0.94,1.20)
50 – 64	241,514	1,370	0.57	1.09	(0.96,1.24)
30 – 49	264,405	1,308	0.49	0.95	(0.84,1.08)
11 – 29†	13,418	79	0.59	1.14	(0.89,1.46)
Missing	7,570	21	0.26		

† Individuals scoring in the 10th percentile or lower are prohibited from applying, although some exceptions have been noted.

Table 3.78 shows the leading diagnoses for disability evaluation from the Army within the first year of service. Data are shown in aggregate for 2004-2008 compared to 2009. Disability discharges for impairments and disease of the spine, skull, limbs, and extremities, as well as other diseases of the musculoskeletal system (including joint replacement) accounted for (50.5%) of all Army disability discharges in 2008-2009 followed by prosthetic implants and other musculoskeletal injuries (30.5%). For 2008-2009 in aggregate around (85%) of all disability discharges were related to musculoskeletal issues while all other disability discharges among first-year soldiers collectively account for only (15%). Nonpsychotic mental disorders were the third leading cause of disability discharges accounting for about (3.0%) of discharges.

TABLE 3.78 DIAGNOSIS CATEGORIES FOR DISABILITY DISCHARGES AMONG FIRST-TIME ACTIVE DUTY PERSONNEL WITHIN THE FIRST YEAR OF SERVICE FOR 2004–2008 VS. 2009: ARMY

Diagnosis category	2004-2008		2009	
	Count	%	Count	%
Impairment, limitation, ankylosis of joints, spine, skull, limbs, and extremities	1,057	39.0	160	53.5
Prosthetic Implants and diseases of the musculoskeletal system	661	24.4	93	31.1
Diseases of the peripheral nerves	70	2.6	10	3.3
Diseases of the digestive system	49	1.8	5	1.7
Diseases of the endocrine system	40	1.5	5	1.7
Affective and nonpsychotic mental disorders	177	6.5	4	1.3
Convulsive disorders	37	1.4	4	1.3
Diseases of the respiratory system	20	0.7	4	1.3
Diseases of the trachea and bronchi	98	3.6	3	1.0
Miscellaneous neurological disorders	39	1.4	2	0.7
Muscle injuries	46	1.7	2	0.7
Dental and oral conditions	1	0.0	1	0.3
Diseases of the arteries and veins	21	0.8	1	0.3
Diseases of the Eye or loss of vision	20	0.7	1	0.3
Diseases of the heart	46	1.7	1	0.3
Organic Diseases of the Central Nervous System	75	2.8	1	0.3
Schizophrenia and other psychotic disorders	78	2.9	1	0.3
The hemic and lymphatic systems	24	0.9	1	0.3
Amputation or anatomical loss of upper and lower extremities	21	0.8	0	0.0
Diseases of the cranial nerves	12	0.4	0	0.0
Diseases of the Ear	3	0.1	0	0.0
Diseases of the genitourinary system	22	0.8	0	0.0
Diseases of the nose and throat	1	0.0	0	0.0
Diseases of the skin	29	1.1	0	0.0
Gynecological conditions and disorders of the breast	5	0.2	0	0.0
Infectious diseases, immune disorders, and nutritional deficiencies	37	1.4	0	0.0
Injury to the mouth, lips, tongue, and esophagus	1	0.0	0	0.0
Organic psychotic disorders	14	0.5	0	0.0
Other and unspecified disorders of the sensory organs	4	0.1	0	0.0
Total	**2,708**		**299**	

Table 3.79 shows the leading diagnoses for disability discharge from the Air Force within the first year of service. Data are shown in aggregate for 2004-2008 compared to in aggregate for 2009. Disability discharges for impairments and disease of the spine, skull, limbs, and extremities (44.8%) was the largest single category for disability discharges among first-year Air Force enlistees in 2009, followed by schizophrenia and other psychotic disorders (10.3%). This is in contrast to the period from 2004-2008 when prosthetic implants and diseases of the musculoskeletal system (17.9%) were the second leading cause of disability discharge in the Air Force.

TABLE 3.79 DIAGNOSIS CATEGORIES FOR DISABILITY DISCHARGES AMONG FIRST-TIME ACTIVE DUTY PERSONNEL WITHIN THE FIRST YEAR OF SERVICE FOR 2004–2008 VS. 2009: AIR FORCE

Diagnosis category	2004- 2008		2009	
	Count	%	Count	%
Impairment, limitation, ankylosis of joints, spine, skull, limbs, and extremities	292	39.7	13	44.8
Schizophrenia and other psychotic disorders	66	9.0	3	10.3
Diseases of the heart	6	0.8	2	6.9
Diseases of the peripheral nerves	17	2.3	2	6.9
Muscle injuries	23	3.1	2	6.9
Affective and nonpsychotic mental disorders	46	6.3	1	3.4
Convulsive disorders	14	1.9	1	3.4
Diseases of the arteries and veins	7	1.0	1	3.4
Diseases of the Eye or loss of vision	1	0.1	1	3.4
Organic Diseases of the Central Nervous System	11	1.5	1	3.4
Prosthetic Implants and diseases of the musculoskeletal system	132	17.9	1	3.4
The hemic and lymphatic systems	3	0.4	1	3.4
Dental and oral conditions	2	0.3	0	0.0
Diseases of the cranial nerves	2	0.3	0	0.0
Diseases of the digestive system	21	2.9	0	0.0
Diseases of the Ear	1	0.1	0	0.0
Diseases of the endocrine system	9	1.2	0	0.0
Diseases of the genitourinary system	6	0.8	0	0.0
Diseases of the respiratory system	4	0.5	0	0.0
Diseases of the skin	6	0.8	0	0.0
Diseases of the trachea and bronchi	47	6.4	0	0.0
Gynecological conditions and disorders of the breast	1	0.1	0	0.0
Infectious diseases, immune disorders, and nutritional deficiencies	2	0.3	0	0.0
Miscellaneous neurological disorders	15	2.0	0	0.0
Organic psychotic disorders	2	0.3	0	0.0
Total	**736**		**29**	

Table 3.80 shows the leading diagnoses for disability discharge from the Navy within the first year of service. Data are shown in aggregate for 2004-2008 compared to 2009. Disability discharges for impairments and disease of the spine, skull, limbs, and extremities (38.5%) and prosthetic implants and diseases of the musculoskeletal system (38.5%) were the largest categories for disability discharges among first-year Navy enlistees in 2009. This is in contrast to the period from 2004-2007 when the two leading conditions were reversed with prosthetic implants and diseases of the musculoskeletal system as the leading cause of disability discharge followed by impairments and disease of the spine, skull, limbs, and extremities.

TABLE 3.80 DIAGNOSIS CATEGORIES FOR DISABILITY DISCHARGES AMONG FIRST-TIME ACTIVE DUTY PERSONNEL WITHIN THE FIRST YEAR OF SERVICE FOR 2004–2008 VS. 2009: NAVY

Diagnosis category	2004- 2008		2009	
	Count	%	Count	%
Impairment, limitation, ankylosis of joints, spine, skull, limbs, and extremities	93	28.4	5	38.5
Prosthetic Implants and diseases of the musculoskeletal system	121	36.9	5	38.5
Affective and nonpsychotic mental disorders	12	3.7	1	7.7
Convulsive disorders	20	6.1	1	7.7
Diseases of the endocrine system	4	1.2	1	7.7
Dental and oral conditions	1	0.3	0	0.0
Diseases of the arteries and veins	5	1.5	0	0.0
Diseases of the cranial nerves	2	0.6	0	0.0
Diseases of the digestive system	3	0.9	0	0.0
Diseases of the Eye or loss of vision	2	0.6	0	0.0
Diseases of the genitourinary system	2	0.6	0	0.0
Diseases of the heart	3	0.9	0	0.0
Diseases of the peripheral nerves	11	3.4	0	0.0
Diseases of the respiratory system	2	0.6	0	0.0
Diseases of the trachea and bronchi	4	1.2	0	0.0
Infectious diseases, immune disorders, and nutritional deficiencies	1	0.3	0	0.0
Miscellaneous neurological disorders	6	1.8	0	0.0
Muscle injuries	10	3.0	0	0.0
Organic Diseases of the Central Nervous System	14	4.3	0	0.0
Other and unspecified disorders of the sensory organs	1	0.3	0	0.0
Schizophrenia and other psychotic disorders	8	2.4	0	0.0
The hemic and lymphatic systems	3	0.9	0	0.0
Total	**328**		**13**	

Table 3.81 shows the leading diagnoses for disability discharge from the Marines within the first year of service. Data are shown in aggregate for 2004-2008 compared to 2009. Disability discharges for impairments and disease of the spine, skull, limbs, and extremities (83.7%) was the largest category for disability discharges among first-year Marines in 2009, followed by prosthetic implants and diseases of the musculoskeletal system (25.%). This is similar to the pattern of discharges observed in the period from 2004-2008.

TABLE 3.81 DIAGNOSIS CATEGORIES FOR DISABILITY DISCHARGES AMONG FIRST-TIME ACTIVE DUTY PERSONNEL WITHIN THE FIRST YEAR OF SERVICE FOR 2004–2007 VS. 2009: MARINES

Diagnosis category	2004-2008		2009	
	Count	%	Count	%
Impairment, limitation, ankylosis of joints, spine, skull, limbs, and extremities	405	52.3	29	53.7
Prosthetic Implants and diseases of the musculoskeletal system	175	22.6	14	25.9
Diseases of the peripheral nerves	49	6.3	4	7.4
Diseases of the respiratory system	8	1.0	2	3.7
Diseases of the digestive system	11	1.4	1	1.9
Diseases of the endocrine system	8	1.0	1	1.9
Diseases of the Eye or loss of vision	2	0.3	1	1.9
Diseases of the genitourinary system	8	1.0	1	1.9
Muscle injuries	16	2.1	1	1.9
Affective and nonpsychotic mental disorders	6	0.8	0	0.0
Convulsive disorders	10	1.3	0	0.0
Diseases of the arteries and veins	6	0.8	0	0.0
Diseases of the cranial nerves	2	0.3	0	0.0
Diseases of the heart	3	0.4	0	0.0
Diseases of the skin	2	0.3	0	0.0
Diseases of the trachea and bronchi	21	2.7	0	0.0
Miscellaneous neurological disorders	5	0.6	0	0.0
Organic Diseases of the Central Nervous System	21	2.7	0	0.0
Other and unspecified disorders of the sensory organs	1	0.1	0	0.0
Schizophrenia and other psychotic disorders	12	1.5	0	0.0
The hemic and lymphatic systems	4	0.5	0	0.0
Total	**775**		**54**	

4. DATA SOURCES

The Accession Medical Standards Analysis and Research Activity (AMSARA) requests and receives data from various sources, most of which are the primary collection agencies for the data they provide to AMSARA. Because data are seldom collected with the goal of epidemiologic study, AMSARA coordinates with the appropriate points of contact to ensure that the following major data types needed for AMSARA studies are in an appropriate form for epidemiologic work.

As mentioned under “Charter and Supporting Documents,” AMSARA maintains strict confidentiality of all data it receives. No external access to the data is allowed, and internal access is limited to a small number of primary analysts on an as-necessary basis. Research results are provided only at the aggregate level, with no possibility of individual identification.

MEPS

AMSARA receives data on all applicants who undergo an accession medical examination at any of the 65 Military Entrance Processing Stations (MEPS) sites. These data, provided by US Military Entrance Processing Command (USMEPCOM) Headquarters (North Chicago, IL), contain several hundred demographic, medical, and administrative elements on recruit applicants for each applicable branch (regular enlisted, reserve, National Guard) of each service (Air Force, Army, Coast Guard, Marines, and Navy). These data also include records on a relatively small number of officer recruit applicants and other non-applicants receiving periodic physical examinations.

From the data records provided by USMEPCOM, AMSARA extracts personal, medical, and administrative variables that are often of use in studies of military attrition. These include personal identifiers (e.g., name and SSN) for linking with other data, demographics (e.g., gender, age, and race), and a wide range of other information that is often relevant to military attrition studies (e.g., intended service, education level at the time of application, and AFQT scores).

In addition, the MEPS records provide extensive medical examination information, including date of examination, medical qualification status, medical disqualification codes (where relevant), and any waiver requirements. Results of some specific tests are also extracted, including those for hearing/vision, alcohol/drug use, and measurements of height, weight, and blood pressure.

A medical disqualification is categorized as either temporary (condition that can be remediated, e.g., being overweight) or permanent (condition that remains with the applicant, e.g., history of asthma). For those applicants with a permanent disqualification, an accession medical waiver from a service-specific waiver authority is required for the applicant to be eligible for accession into the service (see “Waiver”).

MEPS data are the primary source of demographic information on new accessions into the armed forces and of initial medical conditions and medical qualification status. These data are linked by AMSARA to the Defense Manpower Data Center (DMDC) gain files (see “Active Duty Enlistee Gain/Loss”) to verify new accessions into the military and to provide benchmark

descriptive statistics. These linked data are also used in epidemiologic investigations related to the military's accession medical standards, such as selecting and matching subjects for survival studies to compare retention patterns among new recruits with various medical histories.

Active Duty Enlistee Gain and Loss Files

The DMDC provides data on individuals entering military service (gain or accession) and on individuals exiting military service (loss). Gain and loss data, which are AMSARA's primary sources of information about who is, or has been, in the military, include when an individual began duty and when or if an individual exited the military. From this information the length of service can be determined for any individual entering and leaving during the periods studied. This information is vital to survival analyses and attrition studies presented in several AMSARA annual reports.

Gain data include approximately 50 variables. Of these, AMSARA has identified 25 of primary interest: personal identifiers (e.g., name and SSN) for linking with other data; demographics such as age, education, and Armed Forces Qualification Test (AFQT) score at the time of accession; and service information including date of entry and Initial Entry Training (IET) site. These data are combined with MEPS data to determine accession percentages among applicants by demographic and other variables. Also, as mentioned under "MEPS," these linked data are used in epidemiologic investigations related to the military's accession medical standards.

Loss data also include approximately 50 variables, many of which are the same as those found in the gain file, although they reflect the individual's status at the time of loss rather than at the time of gain. The variables of primary interest to AMSARA are personal identifiers for linking with other data, the loss date for computing length of service, and the Inter-service Separation Code (ISC) as a secondary source of the reason for leaving the military. These data serve as the primary source of information on all-cause attrition from the service and are linked with the MEPS and gain data for studies of attrition.

A problem with the loss data lies in the broad nature of the ISC that characterizes the cause of the loss. Although each service maintains its own codes for describing discharge reasons, these are replaced at DMDC by a consolidated ISC to provide a common coding system for all military discharges. Many categories have overlapping definitions, making it difficult to determine the real reason for discharge. For example, a discharge for Existing Prior to Service (EPTS) pregnancy might be coded "pregnancy," "condition existing prior to service," or "fraudulent enlistment." This lack of specificity, as well as inter-service differences in discharge categorizations, has been encountered in comparing other sources of loss information (i.e., EPTS and disability discharge data) with the DMDC loss data. Moreover, a study of Army discharges at one IET site indicates that the reasons underlying many discharges are more complex than can be fully characterized by any single loss code [1].

Medical Waiver

AMSARA receives records on all recruits who were considered for an accession medical waiver, i.e., those who received a permanent medical disqualification at the MEPS (see "MEPS") and sought a waiver for that disqualification. Each service is responsible for making waiver decisions about its applicants. Data on these waiver considerations are generated and provided to AMSARA by each service waiver authority. Although the specifics of these data vary by service, they generally contain identifiers (e.g., name and SSN) for linking with other data, demographics (e.g., gender, age, and race), and information about the waiver consideration.

In particular, each record contains the date of the waiver consideration, indicators of the medical condition(s) for which the waiver was required, and the decision of the waiver authority. The Air Force and Army indicate medical conditions being considered for waiver using the full set of diagnostic codes in ICD-9, whereas the Navy (prior to 2006) and Marines code waiver conditions according to the subset of ICD-9 codes presented in DoD Instruction 6130.3 in association with medically disqualifying conditions.

Many AMSARA studies begin with the waiver data. Individuals granted waivers for a particular medically disqualifying condition are matched to the DMDC gain file to determine their date of entry, if any, into the service. Those found to have begun active duty within a specified time constitute the pool from which the main study subjects, and often their comparison subjects (fully qualified recruits), are drawn. Follow-up medical and attrition information during military service is appended to these records, and statistical comparisons can then be made. Specific details vary among studies. A few additional details of the data provided by each service waiver authority follow.

It should be noted that there are considerable changes over time in the numbers of waiver considerations and percentages approved for various conditions. While some of these changes are attributable to changed accession standards, others appear more likely to have resulted from changes in coding procedures or other unknown factors including the manpower needs of the services. AMSARA will work with the services' waiver authorities to reconcile these findings.

Air Force

The US Air Force Directorate of Medical Services and Training (Lackland AFB, TX) transmits, upon request, data on all officer and enlisted accession medical waivers. These data include SSN, name, action (e.g., approved, disapproved, other), and date of waiver consideration. In addition, ICD-9 codes are used to define the medically disqualifying condition(s) for which the waiver is being considered.

Army

The US Army Recruiting Command (USAREC, Fort Knox, KY) has provided monthly electronic accession medical waiver data since January 1997. Each data record contains name, SSN, action (e.g., approved, disapproved, other), and date of waiver consideration. In addition, ICD-9 codes are used to define the medically disqualifying condition(s) for which the waiver is being considered. Beginning in fiscal year 2008, only one ICD-9 code, which represents the primary condition for which a waiver was considered, will be reported as opposed to previous years in which multiple ICD-9 codes were reported per individual (USAREC, personal communication).

Marines

The US Navy Bureau of Medicine and Surgery (BUMED) in Washington, DC, provides, on request, accession and commissioning medical waiver data for enlisted personnel and officers,

along with data from special programs such as Reserve Officers' Training Corps (ROTC) and the Naval Academy. Data include name, SSN, date of waiver consideration, and recommended action (e.g., approved, disapproved, other). In addition, the subset of ICD-9 codes listed in DoD Instruction (DoDI) 6130.3 is used to indicate the medically disqualifying condition(s) for which the waiver is being considered.

Navy

The Office of the Commander, US Navy Recruiting Command (Millington, TN) provides accession medical waiver data on applicants for enlisted service in the Navy since May 2000. Prior to 2006, medically disqualifying conditions were encoded by the subset of ICD-9 codes defined by DoDI 6130.3. However, since 2006, a hybrid coding system employing elements of both DoDI 6130.3 and the revised instruction, DoDI 6130.4 was in use.

Hospitalization

The US Medical Command (USMEDCOM) Patient Administration Systems and Biostatistics Activity (PASBA) at Fort Sam Houston, TX provide Military Treatment Facilities hospitalization data on a yearly basis for all services except the Coast Guard. These data contain information on admissions of active duty officers and enlisted personnel to any military hospital. Information on each visit includes SSN for linking with other data, demographics (e.g., gender, age, and race), and details about the hospitalization. In particular, the medical diagnosis associated with the hospitalization is coded according to the ICD-9, with up to eight codes per record to describe all conditions found. Date of admission, date of disposition, number of sick days, number of bed days, and indicators of the medical outcome are also included.

EPTS Discharges

Discharges for EPTS medical conditions are of vital interest to AMSARA. A discharge for a medical condition can be classified as an EPTS discharge if the condition was verified to have existed before the recruit began service and if the complications leading to discharge arose no more than 180 days after the recruit began duty. USMEPCOM requests a copy of official paperwork on all EPTS discharges and records certain information about each. This information includes a general medical categorization (20 categories) of the reason(s) for discharge and a judgment on each discharge regarding why (i.e., concealment, waiver, or unawareness) the person was not rejected for service on the basis of the preexisting condition. Beginning in August 1996, this paperwork has been regularly forwarded by USMEPCOM to AMSARA for additional data extraction, including more specific coding of medical conditions leading to discharge.

The primary concern with the EPTS discharge data is completeness. Table 4.1 summarizes the numbers of records provided to AMSARA over 2004-2009. Note that the numbers of records have been unstable over time for nearly all IET sites. For example, the numbers of EPTS records provided by the Marine Corps Training Depot in San Diego were considerably lower in 2005 and 2006; no EPTS discharges were reported by this training site between 2007 and 2009. In addition, the number of EPTS discharges from Ft. Jackson decreased significantly beginning in the fourth quarter of 2009. Some variability in numbers of EPTS records over time is expected, underreporting is clearly a major source of the fluctuations.

TABLE 4.1 EPTS DISCHARGE DATA REPORTED TO USMEPCOM BY TRAINING SITE AND YEAR[†]

Training Site		Fiscal Year of EPTS Discharge						
		2004	2005	2006	2007	2008	2009	Total
Army	Fort Benning	1,417	1,532	623	356	861	963	5,752
	Fort Jackson	1,127	1,109	887	993	689	18	4,823
	Fort Knox	356	323	136	259	346	330	1,750
	Fort Leonard Wood	691	659	336	422	800	835	3,743
	Fort Sill	695	272	168	281	335	186	1,937
Navy	Great Lakes	856	1,213	1,300	1,892	1,883	1,526	8,670
Marines[‡]	Parris Island	1,191	1,299	1,387	1,365	1,294	801	7,337
	San Diego	588	258	348	-	-	-	1,194
Air Force	Lackland AFB	807	461	963	1,190	1,122	632	5,175
Coast Guard	Cape May	187	166	211	260	316	188	1,328
Total		7,915	7,292	6,359	7,018	7,646	5,479	41,709

[†] Numbers may not sum to totals shown in Section 2 because information from specific training sites is incomplete and other requirements for records are different.

[‡] EPTS discharges were not reported by the San Diego Marine Corps training site in Fiscal Years 2007 -2009.

AMSARA has addressed many of these data inconsistencies with on-site officials and continues to emphasize the importance of these data to assessing and improving the fitness of future recruits.

In light of these shortcomings in the data, comparisons of EPTS discharges across services, or even across different training sites within the same service, should be interpreted with caution. Disparities may reflect differences in reporting procedures more than actual differences in discharge likelihood. Furthermore, counts of EPTS records should not be construed as representing all EPTS discharges. Instead EPTS counts only represent discharges for which data were reported.

Disability Discharges

Data on disability discharge considerations are compiled separately for each service at its disability agency. The Army agency has provided data on all disability discharge considerations during 1995–2009 and continues to provide these data. The Air Force agency has also provided data to cover the period of 1995–2009. Data from the Department of the Navy are available from 2000 to 2009.

The Army Physical Disability Agency (PDA) provides information on all disability cases considered, including personal identifiers (e.g., name and SSN), program (e.g., regular enlisted, academy, or officer), date of consideration, and disposition (e.g., permanent disability, separation with or without benefits, temporary disability, or return to duty as fit). For individuals receiving a disability discharge, medical condition codes and degree of disability (rating) are also included.

The Air Force Physical Disability Division provides data on all disability discharges, including much of the same information as outlined for the Army. Specifically, these data include personal identifiers (e.g., name and SSN), rank, date of consideration, and disposition (e.g., permanent disability, temporary disability, severance, separated without benefit, or return to duty as fit). For

individuals receiving a disability discharge, medical condition codes and degree of disability are also included.

The Secretary of the Navy, Council of Review Boards provides data on all disability cases it considers, including much of the same information as outlined for the Army. Specifically, these data include personal identifiers (e.g., name and SSN), rank, date of consideration, and disposition (e.g., permanent disability, temporary disability, or return to duty as fit); as well as percent rating and medical condition codes for individuals receiving a disability discharge.

For all sources of disability data, the medical condition(s) involved in each case are described using the condition codes of the Veterans Administration Schedule for Rating Disabilities (VASRD). This set is less comprehensive than the ICD-9 codes. In some cases the disabling condition has no associated code, so the code most closely resembling the true condition is used. AMSARA therefore only uses broad categories of disability condition codes rather than attempting to interpret specific codes. These categories are defined in Table 4.2 and reflect revisions made for the fiscal year 2008 Annual Report.

TABLE 4.2 VASRD CODE GROUPINGS

VASRD code range	Conditions encompassed	VASRD code range	Conditions encompassed
5000 - 5099	Prosthetic Implants and diseases of the musculoskeletal system	7300 - 7399	Diseases of the digestive system
5100 - 5199	Amputation or anatomical loss of upper and lower extremities	7500 - 7599	Diseases of the genitourinary system
5200 - 5299	Impairment, limitation, ankylosis of joints, spine, skull, limbs, and extremities	7600 - 7699	Gynecological conditions and disorders of the breast
5300 - 5399	Muscle injuries	7700 - 7799	The hemic and lymphatic systems
6000 - 6099	Diseases of the Eye or loss of vision	7800 - 7899	Diseases of the skin
6200 - 6269	Diseases of the Ear	7900 - 7999	Diseases of the endocrine system
6270 - 6279	Diseases of other sense organs (smell and taste)	8000 - 8099	Organic Diseases of the Central Nervous System
6280 - 6299	Other and unspecified disorders of the sensory organs	8100 - 8199	Miscellaneous neurological disorders
6300 - 6399	Infectious diseases, immune disorders, and nutritional deficiencies	8200 - 8499	Diseases of the cranial nerves
6500 - 6599	Diseases of the nose and throat	8500 - 8799	Diseases of the peripheral nerves
6600 - 6699	Diseases of the trachea and bronchi	8900 - 8999	Convulsive disorders
6700 - 6799	Tuberculosis	9200 - 9299	Schizophrenia and other psychotic disorders
6800 - 6899	Diseases of the respiratory system	9300 - 9399	Organic psychotic disorders
7000 - 7099	Diseases of the heart	9400 - 9599	Affective and nonpsychotic mental disorders
7100 - 7199	Diseases of the arteries and veins	9900 - 9999	Dental and oral conditions
7200 - 7299	Injury to the mouth, lips, tongue, and esophagus		

Charter and Supporting Documents

HA Control #: NONE
Due Date: NONE

February 28, 1995

ASSISTANT SECRETARY OF DEFENSE
(HEALTH AFFAIRS)
EXECUTIVE SUMMARY/COVER BRIEF

MEMORANDUM FOR THE ASSISTANT SECRETARY OF DEFENSE
(HEALTH AFFAIRS)

THROUGH: Dr. Sue Bailey, DASD (CS)

FROM: Action Officer, Colonel Ed Miller

SUBJECT: Accession Medical Standards Analysis and Research Activity (AMSARA)

PURPOSE:

SIGNATURE--on request that the Assistant Surgeon General of the Army (Research and Development) establish an Accession Medical Standards Analysis and Research Activity (AMSARA).

DISCUSSION:

The Accessions Medical Standards Working Group which met over the summer sponsored through MFIM funding completed a functional economic analysis of the medical accessions examination process. One of the critical recommendations made by the Group was to establish a research activity to provide the Medical Accessions Standards Council (also recommended) with an evidence-based analysis of DoD accessions medical standards. The memorandum tasks the Army with the responsibility of establishing the activity resourced under the Defense Health Program. This has already been staffed with the Assistant Surgeon General of the Army (Research and Development)

RECOMMENDATION:
Sign tasking memorandum to Army Surgeon General.

COORDINATION:
Mr. Conte, PDUSD(P&R)_____
Mr. Maddy, HB&P: See attached memo
Mr. Richards, EO: _____
Dr. Martin, PDASD: _____

CHARTER AND SUPPORTING DOCUMENTS

THE ASSISTANT SECRETARY OF DEFENSE

WASHINGTON, D. C. 20301-1200

HEALTH AFFAIRS

DEC 0 6 1995

MEMORANDUM FOR SURGEON GENERAL OF THE ARMY

SUBJECT: Military Medical Standards Analysis and Evaluation Data Set

The personnel community has asked OASD/HA to develop a fact based accessions policy to minimize medical attrition, quantitate risk in medical waivers, and to defend accession decisions when challenged.

The offices of Clinical Services and Military Personnel Policy have worked closely with epidemiologists at Walter Reed Army Institute of Research on the concept of a Military Medical Standard Analysis and Evaluation Data Set (MMSABDS) to apply quantitative analysis to a longitudinal data base.

The Army Center for Health Promotion and Preventive Medicine (CHPPM) maintains a data base of personnel, hospitalization, deployment and separation information for all Services. I would like WRAIR, in coordination with CHPPM, to serve as consultants to the Accession Medical Standard Steering Committee, modify and maintain the data base, and coordinate field research to answer specific questions germane to accession policy.

Therefore, I request that, by the end of December 1995, a proposal be submitted through you from WRAIR, outlining the consultant role and modifications needed to the data base. This should include funding requirements.

Edward D. Mallett /for
Stephen C. Joseph, M.D., M.P.H.

cc:
Commander WRAIR

DEPARTMENT OF DEFENSE
ACCESSION MEDICAL STANDARDS
STEERING COMMITTEE

CHARTER

I. ESTABLISHMENT, PURPOSE AND SCOPE

A. ESTABLISHMENT

The Under Secretary of Defense (Personnel and Readiness) establishes a Department of Defense Accession Medical Standards Steering Committee (hereafter referred to as the "Committee".) The Committee shall operate under the joint guidance of the Assistant Secretaries of Defense (Force Management Policy and Health Affairs [FMP & HA].)

B. PURPOSE

The Committee's main objective is to ensure the appropriate use of military members with regard to medical/physical characteristics, assuring a cost-efficient force of healthy members in military service capable of completing initial training and maintaining worldwide deployability. The primary purposes of the Committee are: (1) integrating the medical and personnel communities in providing policy guidance and establishing standards for accession medical/physical requirements, and (2) establishing accession medical standards and policy based on evidence-based information provided by analysis and research.

C. SCOPE OF ACTIVITY

1. The Committee's responsibility involves:

a. Providing policy oversight and guidance to the accession medical/physical standards setting process.

b. Directing research and studies necessary to produce evidenced-based accession standards making the best use of resources.

c. Ensuring medical and personnel coordination when formulating accession policy changes.

d. Overseeing the common application of the accession medical standards as outlined in DoD Directive 6130.3, "Physical Standards for Appointment, Enlistment, and Induction."

e. Interfacing with other relevant Department of Defense and Department of Transportation organizations.

f. Recommending promulgation of new DoD directives as well as revisions to existing directives.

g. Recommending legislative proposals concerning accession medical/physical processing.

h. Reviewing, analyzing, formulating and implementing policy concerning the accession physical examination.

i. Issuing policy letters or memoranda providing interpretation of provisions of DoD directives.

j. Resolving conflicts of application of accession medical/physical standards and policies among the Military Services and other authorized agents.

k. Maintaining records and minutes of Committee meetings.

II. ORGANIZATION

A. The Committee will be co-chaired by the Deputy Assistant Secretary of Defense (Military Personnel Policy) and the Deputy Assistant Secretary of Defense (Clinical Services). This will facilitate tasking the Deputy Chiefs of Staff for Personnel and the Surgeons General to assign staffers to relevant working groups, and to ensure DCS/Personnel and Surgeon General personal involvement with the various issues. The Committee will convene semiannually, at a minimum, and at the discretion of the Chairpersons.

B. Committee members are appointed by the Under Secretary of Defense (Personnel and Readiness) and provide ongoing liaison with their respective organizations concerning matters of medical/physical accession policy.

C. The Committee shall be composed of representatives from the following:

Office of the Assistant Secretary of Defense (Force Management Policy)

Office of the Assistant Secretary of Defense (Health Affairs)

Office of the Assistant Secretary of Defense (Reserve Affairs)

Office of Service Surgeons General

Office of Service Deputy Chiefs of Staff for Personnel, and Chief of Personnel and Training, HQ U.S. Coast Guard.

D. Representatives from the Office of the Assistant Secretary of Defense (Force Management Policy) and the Office of the Assistant Secretary of Defense (Health Affairs) shall serve as executive secretaries for the Committee, and maintain a working group, composed of representatives from each of the offices mentioned above, to receive and review issues pertinent to accession policy.

E. The Commander, U.S. Military Entrance Processing Command, and the Director, DoD Medical Examination Review Board shall serve as advisors to the Committee.

F. The Committee may invite consultants (i.e., training, recruiting, epidemiology) at the discretion of the Chairpersons.

Approved: JAN 16 1996
Date

EDWIN DORN

Acronyms

ACL	anterior cruciate ligament
ADD	attention deficit disorder
ADHD	attention deficit and hyperactivity disorder
AFB	Air Force base
AFQT	Armed Forces Qualification Test
AMSARA	Accession Medical Standards Analysis and Research Activity
AMSWG	Accession Medical Standards Working Group
ARMS	Assessment of Recruit Motivation and Strength
AWCP	Army Weight Control Program
BCT	Basic Combat Training
BF	body fat percent
BMI	body mass index
BUMED	Navy Bureau of Medicine and Surgery
CENTCOM	United States Central Command
CY	Calendar year
DEP	Delayed Entry Program
DMDC	Defense Manpower Data Center
DoD	Department of Defense
EBF	exceeding body fat percent
ENT	ear, nose and throat
EPTS	existed prior to service
FQ	fully qualified
FY	fiscal year
GED	general educational development
HS	high school
HCU	health care utilization
ICD-9	*International Classification of Diseases*, 9th Revision
IET	Initial Entry Training
ISC	Interservice Separation Code
MEPS	Military Entrance Processing Station
MTF	Military Medical Treatment Faculty
OMF	Objective Medical Finding
PASBA	Patient Administration systems and Biostatistics Activity
PDA	Army Physical Disability Authority
ROTC	Reserve Officer Training Corps
SSN	social security number
USAREC	US Army Recruiting Command
USMEDCOM	US Medical Command
USMEPCOM	US Military Entrance Processing Command
VASRD	Veterans Administration Schedule for rating Disability
WRAIR	Walter Reed Army Institute of Research